

ENVIRONMENT
COMMITTEETHE ENVIRONMENT WHITE PAPER:
THIS COMMON INHERITANCE (Cm 1200)

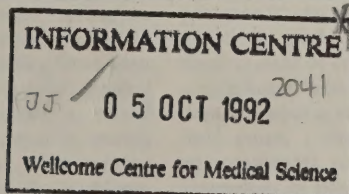
MINUTES OF EVIDENCE

Wednesday 21 November 1990

DEPARTMENT OF THE ENVIRONMENT

Mr Chris Patten MP, Mr Derek Osborn, Dr David Fisk and Mr Robin Young

*Ordered by The House of Commons to be printed
21 November 1990*

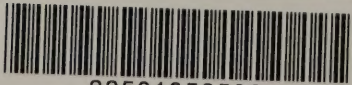


LONDON : HMSO

£6.10 net

WELLS LIBRARY
P
7070

INFORMATION CENTRE
15 OCT 1985
Wellington Centre for Medical Education



22501856532

MINUTES OF EVIDENCE

TAKEN BEFORE THE ENVIRONMENT COMMITTEE

WEDNESDAY 21 NOVEMBER 1990

Members present:

Sir Hugh Rossi, in the Chair.

Mr Henry Bellingham
Mr Richard Holt
Dr Kim Howells
Mr Andrew Hunter
Mr Robert B Jones

Mr Terry Lewis
Mr Keith Mans
Mr Tom Pendry
Mr Robin Squire

Examination of witnesses

MR CHRIS PATTEN, MP, Secretary of State, MR DEREK OSBORN, Grade 2, Director General, Environmental Protection, DR DAVID FISK, Grade 3, Head of Air, Climate and Toxic Substances Directorate, and MR ROBIN YOUNG, Grade 3, Director of Environmental Policy and Analysis, Department of the Environment, examined.

Chairman

1. Secretary of State, may I welcome you to this session of our Committee, and I wonder if you would like to start by introducing the officials whom you have brought with you?

(*Mr Patten*) Thank you, Chairman. First of all, can I thank you very much indeed for the invitation to attend the Committee today; it is very welcome, though I guess we might have improved on the timing. I know what a considerable contribution the Committee has made to the development of environment policy over the years; I know most recently the lead the Committee has taken in the debate about sewage treatment and the discharge of sewage to our coastal waters, so I am particularly grateful to have this chance of talking about the White Paper. The colleagues I have with me are David Fisk, who is my Chief Scientific Adviser, who I think has given evidence to the Committee already; Derek Osborn, who is the Deputy Secretary responsible for the environmental command in my Department; and Robin Young, the Under Secretary who led the team that helped co-ordinate work on the White Paper. That is our team, and we look forward to discussing it with you.

2. I am glad that you have mentioned the White Paper because, although we are in the middle of an inquiry into the destruction of the tropical rain forests and the effect upon global climate, having you in front of us of course makes us anxious to raise with you a number of wider questions arising from your White Paper. I would like to start with a very general question. The White Paper received a mixed reception and there was much criticism of it, mainly on the basis that, as was said by some, it represents a rehash of old policies, in relation to the problems, and does not appear to make any positive commitments to solutions. I wonder whether you would like to comment on those criticisms?

(*Mr Patten*) I read a number of criticisms in press

releases which were launched even before we had published our White Paper, so I think that some of the criticism to which we were subjected was drafted before people had a very clear idea of what was in our White Paper. Our White Paper does bring together policies that were already in existence before it was published and new initiatives as well, but over the last 12 months we have changed and developed policy in a number of ways, and which can, I think, reasonably be regarded as radical. If we had saved up all the changes that have been made since the summer or early autumn of 1989 and not announced them until the White Paper I guess the White Paper would have looked a more spectacular document than some people claimed it to be. For example, we have made major changes in environmental protection, as you know, major changes in relation to waste, major changes in relation to water quality and water treatment, major changes which will be implemented in forthcoming legislation on planning; to those changes we added a number of other policy developments in the White Paper, particularly in relation to energy efficiency, but also in relation to the countryside, the built heritage, and so on. In combination, I think that amounts to an impressive and comprehensive list of proposals. I would say only one other thing. There are over 200 initiatives which we are following up as a result of the White Paper, 200 initiatives which more than justify the creation of permanent machinery in Government, a point to which we might be able to return, to oversee the development of environmental policy. I think that is a significant indication of the extent as well as the depth of what is in our document. If I may make one final point, I think that all of us in developing environmental policy—you, yourselves, may find yourselves in this position—are aware both of the fact that many environmental groups have helped gallantly and perceptively to point the way in which conventional politicians have subsequently followed, but at the same time environmental policy and its

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Chairman Contd]

development does go to the very heart of single-issue politics, it does go to the heart of lobby-group politics, where it is extremely difficult to earn the plaudits, where it is extremely difficult to earn the support which I think is sometimes deserving. I also think that the real challenge for us in developing environmental policy is to try to ensure that it moves forward on the basis of rational discussion and a rational appreciation of cost and benefit and is not driven here and there by short-term populist pressures; and that, too, I guess, is relevant to the response which our White Paper initially drew. I think the White Paper gets a more sensible and intelligently critical response the longer it lies on the table.

3. I wonder if I could then make a comparison, because when the Committee was in Holland about a year ago, in connection with our inquiry into contaminated land, we were given a presentation upon the Dutch National Environmental Policy Plan. It is a smaller volume than your White Paper yet, on the other hand, it does contain within its Appendix a series of carefully-costed proposals for reduction of pollution: carbon taxes, speed restrictions to save fuel, that kind of thing. Why, with that available at the time, was it decided within the Department not to put forward costing proposals for dealing with pollution rather than dealing with them in the kind of general terms that we find in our White Paper?

(*Mr Patten*) I am glad you have mentioned the Dutch plan. There are not, of course, many similar documents produced by other Community countries. The French have produced an interesting plan, the main proposal of which, the main consequence of which is, I believe, the creation of a French Environment Department, but it is a programme in which I think there are only two paragraphs on transport. The Italians have been attempting to legislate on the environment for some time, but so far without the success which I am sure they wish to see. The Dutch have been well ahead of the rest of the Community in setting out their own programme, but I would like, if I may, to distinguish between the documents to which you referred, Sir Hugh, and their more recent document. They did produce an interesting document last year which supported the contention of all those who have pointed with some confidence and pride to the leadership which the Dutch have shown in environmental matters; I think there is a lot we can learn from the Dutch and I hope there are some things that the Dutch can from time to time learn from us, and we have a very close relationship with them. Their plan of last year is full, as you said, of aspirational targets. It has been followed by a second plan this year in which they attempt to say how those aspirational targets would be reached, and I think it is fair to say that that plan has been greeted by a rather more critical response than the original aspirational plan and there are a number of particular areas—road pricing, dealing with their own traffic problems—where, for understandable reasons, and I do not mean to be critical because they are extremely positive in all those areas, they are having some political

difficulties; I guess it is not surprising. The Dutch, in a small country, have many more cars than we have, probably 24–25 per cent more, and they use those cars more; they use those cars more because for a number of years the Dutch encouraged people to drive those cars because they wanted them to live in the suburbs, a consequence of decisions on land-use planning having environmental effects. The Dutch are now having to row back from that and it is difficult, and the pace at which they can row back from it has recently brought, as I said, a more critical response than attended their first document. Nevertheless, we have things to learn from them, as I am sure we will have things to learn from the Canadians, who are proposing to bring out their own plan shortly. The extent to which we have costed, the extent to which we have been specific, varies considerably from area to area. Nobody could conceivably look at the water environment, at our proposals on water quality, and argue that we have other than a precise and detailed and costed programme for improvement; we have pretty precise costings when it comes to acid rain. There are other areas—not least in relation to market-based incentives—where I think all of us are moving up the learning curve and where it would, frankly, have been wrong to ‘go nap’ on any particular solutions at the moment; but I do not regard our own White Paper as the last word on these matters, it will be followed in time by developments of policy and those developments will, I hope, benefit from the increasingly close relationship that we have with our Dutch colleagues, our German colleagues and others.

4. Sitting where we sit and having looked at these problems objectively, certainly insofar as dealing with global warming, energy conservation and the emission of pollutants generally into the atmosphere are concerned, those are going to require substantial changes in the lifestyles of people in this country—some of them may be very unwelcome—and I can see that pushing forward too hard might make the government that is pushing them forward very unpopular, certainly in the short term, because a lot of the measures will have to hurt if they are going to be effective. Possibly that is the difficulty the Dutch have run themselves into already and that is why they are backtracking on their first paper; and I was very interested to hear that you were, in fact, confirming that that is the situation in which they find themselves?

(*Mr Patten*) I am not sure whether I would use the word “backtracking”; what I would say is that inevitably they are starting from a high base-line because they have an admirable record in many of these areas and an admirable record in promoting a rational debate, but they are running into the difficulties which all of us, as politicians, have of translating our rhetoric and our aspirations into policies behind which we can mobilise public consent. I believe that the argument is likely to become more rational and less infused by short-term populism as people are obliged, with I hope the encouragement of politicians, to face up to the consequences of our hopes and aspirations, to face

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Chairman Contd]

up, for instance, to the costs of some of the things that we want to do. As we are only too well aware, we are going to see that over the next year or so, in relation to the new system of integrated pollution control, which is undoubtedly going to lead to lobbying of members of the Select Committee, of Members of the House in general by industry about the costs of complying with an extremely sophisticated and rigorous control regime. We are going to see, I guess, the argument about water quality conducted in more sophisticated terms as the consequences of improving water quality are visited through the price mechanism on people's pockets and purses. I think those are all positive things because I do want to see us look with a much beadier eye at environmental costs and benefits; I think we want to avoid being driven into billion-pound solutions for million-pound problems and I do not think that arguing for greater rationality and arguing more seriously about economic costs and benefits should be taken as a sign of lack of house spirit on the environment.

5. On the question of cost, then, your White Paper contains some 350 proposals; how many of those are new and how much would their implementation cost?

(Mr Patten) You asked earlier about new and old in the White Paper and I attempted—

6. You said 200 initiatives, that was the figure that you gave?

(Mr Patten) I attempted, in a Professor Joad-like way, to define terms and to talk about new, not just in the context of the White Paper but of the policies that we had started to change and to implement from a year or so before. On costings, there are I suppose two or three obvious ways in which you can look at costs. First of all you can look at precise costs on which we have already placed a tag, costs which will largely be met through the price mechanism, and I would refer in particular to the costs of improvement of water quality, where we are talking about an increase of £28 billion in investment over the next 10 years, a figure which has, of course, increased because of our commitments on sewage sludge and on the treatment of the sewage that goes down long sea-outfalls. One can also look at the £6 billion programme for dealing with acid rain and for complying with the Large Combustion Plants Directive. Secondly, there are the specific public expenditure consequences of identified environmental initiatives; there are the additional resources for the Countryside Commission, for English Heritage, for the NCC, for environmental research, for the National Rivers Authority, for the Pollution Inspectorate; all extra costs which we set out in our public expenditure press notice after the Autumn Statement, which I am sure the Committee will have to hand. Thirdly, there are the longer-term costs which I think will involve precisely the sort of changes of lifestyle to which you have referred. Most obviously, as we say again and again in the White Paper, in the long term, though we think not in the short term, with the exception of transport, we are going to have to face the fact that we will need to pay a higher price, relatively, for energy over the next few years; to the extent that we do not achieve our

ambitions on greenhouse gas emission stabilisation and reduction through regulation the price will have to take the strain, but I could not, at the moment, put a precise figure on that.

Mr Jones

7. A moment ago you touched on the problem of single-issue politics and I guess that the White Paper represents a lot of discussions that have been going on between various Government Departments about the inter-play between particular policies and other policies pursued by different Departments, and for that matter resolved, no doubt, at Cabinet level, looking at some sort of cost/benefit analysis. One of the things you have not touched on, though, is the impact of European legislation, which, to an extent, is single-issue politics because these Directives are framed on the basis of these issues alone. This Committee has criticised the water quality requirements, the lack of a scientific basis for the nitrate levels and it has criticised the impossibility of complying with the salmonella requirements in the Bathing Waters Directive. How is it possible, within a democratic society, to resolve those sorts of issues, to conduct a proper cost/benefit analysis when the legislation that we are expected to comply with is not itself framed on the basis of relative costs and relative priorities?

(Mr Patten) I think that you have raised, in more accessible language, one of the most difficult issues that we face—subsidiarity—and subsidiarity related to what makes good environmental sense. We have tried to play a positive and constructive role in the development of the Community's environmental policy. I say, out of no spirit of vainglory but as a statement of fact, that I think I am the first Secretary of State for the Environment to attend European Environment Council meetings; I think Peter Shore went once, but it has been a consistent feature of both Labour and Conservative Governments that the Secretary of State has not gone to European Environment Council meetings. I have tried to go as a corporeal indication of the priority that we give to playing a positive role in the Environment Council, as we should, as we should for two very clear reasons; first of all, a good deal of environmental policy can only properly be made at the regional level, anything to do with air quality, for example. We are increasingly aware of the fact that in order to deal adequately with photochemical smog we are going to have to deal with it at the European level. Secondly, the creation of the single market, in which we have played such a prominent role, plainly has implications for environment policy as well; it is one reason why we have been pursuing the idea of an eco-labelling scheme at the Community level rather than just at the national level. For all those reasons it is totally right that this country should play a prominent role in the Community but, first of all, I see no reason at all why we should encourage, or connive, at the Community taking a hand in issues that we can perfectly well deal with ourselves. Let me give you one specific present example: the implications of the Birds Directive in this country. In this country we have had as good a system of wild-life

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Jones Contd]

preservation, of habitat protection, as any country in the European Community. I spent part of my summer holidays in one European country, which has like us signed the Birds Directive, where one thing you never do is hear a bird sing, where they blaze off at anything that flaps its wings. I do not think we need to be given lectures about how we preserve wildlife and yet we have found ourselves in the position in the last weeks in which, to comply with the Birds Directive, we were going to be obliged to treat crows and magpies as if they were game birds. When you are driven into that sort of nonsense, when you are driven into as it were providing a close season so that magpies and crows can breed more satisfactorily, then it is, I think, important for individual Member States to argue pretty vehemently for a clearer appreciation of subsidiarity when it comes to policy-making. Second issue: there is a real danger, as well, of us finding ourselves in a position where, with some difficulty, politicians (and I think it applies across the parties) find themselves withstanding single-issue pressure groups in their own country only to find themselves bowled over by them when it comes to trying to make policy in the Environment Council of the European Community. It is within my recollection that at one European environment meeting we found ourselves discussing reductions in a particular substance, with us beginning with a figure which we thought was based on sound scientific evidence, industrial advice, with us finding every other Member State bidding up as we went round the Council until we got to 100 per cent, at which point the Chairman said, making the point rather well, "Anybody bid 105 per cent?". Making policy in that sort of way is absolutely ridiculous. Finding ourselves in the position in which it is constantly argued, and I think it happens in other Member States as well, that anything which comes out of Brussels, in environmental terms, must make sense and any attempt to argue about it demonstrates a lack of environmental enthusiasm on our part is a very silly way of making environment policy and I hope that we can avoid getting dragged down that path. I would just say one other thing. One reason why I am very keen to see a European Environment Agency established sooner rather than later is so that we can have more sensible discussions about comparative environmental performance within the Community, on the basis of an accepted database. I also think that should enable us to look with a beadier eye at the relationship between environmental rhetoric—you could say exactly the same about economic convergence rhetoric in the Community—and compliance with Directives.

Chairman

8. You may recall that in the Committee's Toxic Waste Report we advocated consideration of the setting up of an Environmental Protection Agency; the Government's response was not very favourable to that concept at the time. However, recently in a debate your Minister of State, Mr Trippier, replying to some questions I put to him, said that the Government now has it certainly in mind to move towards establishing a regulatory authority at some

stage, along the lines of the Environmental Protection Agency. That was a very welcome reply; it did indicate somewhat a shift of thinking within the Department, but on the other hand "at some stage" still leaves the concept very, very much in the air. I wonder whether it is possible for you to give, at this stage, some indication of the time-scale that might be involved for this move to be made?

(Mr Patten) Can I first of all say that I think David also indicated, during the course of that interesting debate on the floor of the House, that the Environmental Protection Agency was not entirely the institution which people sometimes suggested—that is, the EPA in the United States—and that, interestingly, as we were being pressed to slough-off our environmental regulatory responsibilities into a body outside government, rather like the Health and Safety Executive, in order to demonstrate our environmental credentials, so the Americans are legislating for making the EPA into a Department of State, with the Head of the EPA as a member of the Cabinet, as a demonstration of their environmental credentials. I think that we should be aware of the extent to which these policy impulses appear to be passing like ships in the night. My own view on the issue is a fairly straightforward one, and I hope it will not seem to you too unheroic. We have only recently set up the HMIP and the NRA and, candidly, the first task we have with those institutions is to make them work. It is not just a question of resources, though resources is part of the issue and hence the very large increase in the NRA's budget which we have announced for next year. What we are really talking about as well is institutions which are operating at the further ends of environmental technology, and if you talk to my German or Dutch colleagues I think you will find them saying exactly the same as I am saying, that we are very hard-stretched, as is industry, to actually operate on these frontiers. That raises all sorts of questions of training and of education, which, for instance, we have addressed in the White Paper, in, I think, an important chapter which we have been discussing subsequently with the Open University and others. I think whoever is making environmental policy is going to find that one of the real difficulties is in ensuring that the regulatory agencies can do the job which Parliament expects of them; it is no criticism of them to say that it is a challenging assignment for them. In those circumstances, facing those difficulties, I asked myself very seriously whether it would be right, when there are all those other problems, to create a new set of institutional problems by trying to roll the NRA and HMIP together and risk another year or two of disruption, while, for instance, we are trying to ensure that the NRA can properly police the water legislation, while trying to ensure that the Pollution Inspectorate can issue good guidance notes on integrated pollution control and properly police IPC. I repeat that I reached the conclusion that the important thing to do was to get HMIP and NRA up and running and effective as soon as possible; but, and I hope it is a creative "but", I have an open mind about the future relationship between HMIP and the NRA and I think it would be curious if our

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Chairman Contd]

environmental protection institutions did not grow towards one another, if not literally together, over the next few years. However, I would like to see that development being incremental, perhaps beginning with the establishment of some sort of umbrella body over them, and I would not like to see it disrupting the very real problems that they are going to have in establishing their own institutional and technological credibility and capability in the next few years.

9. I think you have partly answered the question I was going to ask, emerging out of your original comments on this; and that is, what will be the relationship, in fact, between the NRA and HMIP when HMIP becomes a "Next Steps" agency? I think that that is a matter of great concern outside, because industry in particular is worried about the overlap that appears to exist in some areas between HMIP and the NRA and the fact that they will have not just one inspector coming along and dealing with them but several inspectors coming along from the different agencies, local authorities as well, and that overlap does not seem to be terribly desirable and one would have hoped that some clear lines were drawn or they were merged together and became one operation?

(*Mr Patten*) We are aware of those problems and, of course, they were addressed during the passage of the Environmental Protection Act, not only in this House but in Another Place, where the debate owed much to the contributions of the Chairman of the NRA. I think that the NRA and HMIP are aware of the importance of working together as closely as possible; I think they have made sterling efforts to do that. I am very grateful to the Chairman of the NRA and his Chief Executive, in particular, for what they have done. We have to remember that when we were first discussing integrated pollution control the pressure from industry was for us to create a one-stop shop, so far as consents were concerned, and I think that some of the criticism of overlap would, paradoxically, have moved away from a one-stop shop in the way that the HMIP and NRA in practice operate, but we are aware of the importance of them working closely together. As I said, I think that the first priority is that they should establish their capability on the ground, then we may need to look sooner rather than later at institutional ways of relating their operations, and I certainly do not rule out closer integration or even merger for the longer term, but I do not think, myself, that one necessarily solves any problems by making a sudden or radical institutional change in this area. My worry has always been that we would actually delay compliance with tough and rigorous standards if we went in for another institutional reorganisation.

10. Concerning the relationship between HMIP and the Department, will there be more of an "arm's-length" relationship between HMIP and the policy side of DOE?

(*Mr Patten*) I am very keen that we should get ahead with the establishment of HMIP as a "Next Steps" agency, not least because I think it should then enable us to have a more serious debate about charging for pollution control regulation. As you

know, in the White Paper we refer to the fact that, while in the short term HMIP will be levying charges which recover costs, for the longer term we want to look at incentive charging and load charging as a positive way of encouraging higher environmental standards and better performance, and I think that a "Next Steps" agency, where you are, after all, talking about a more coherent and independently-managed and budgeted-for institution, should help in that process.

Mr Holt

11. Secretary of State, given that you had all the American experience of their environment protection bodies and you had an option whether to go down that route or to go down the route which you followed, and you seem to indicate from your answers that you may even now go down that second route by a form of incremental merger, what were the overriding reasons which persuaded you in the first place not to go on the global route of an Environment Protection Agency, as suggested by this Committee, and what so swung you to set up the NRA in the way in which you did?

(*Mr Patten*) I think the way that you phrased the question enables me the more easily to make it clear that, for me, it is a question of judgement rather than a question of dogmatic belief in the efficacy of one model rather than another. My own judgement is that you and others were likely to be more critical of me if we had created an institution which was unable, because of institutional turmoil, to police the regulations laid down by Parliament and desired by the Community; you were likely to be more critical on that front than if I had kept the institutions separate until they had actually established their, what my children would call, "street cred". I think it is only a matter of judgement. I can quite see how others might have come to a different conclusion, but I think if they had come to a different conclusion they would have had even more difficulty helping the NRA and the HMIP through what are inevitably going to be two or three pretty tricky years as we ensure that both the financial and the human resources are available to do a very difficult and demanding job.

Dr Howells

12. Secretary of State, I wanted to ask you—I cannot resist asking you—if your Department has made any calculation of the effect on the climate, on the atmosphere, of the huge emission of harmful gases, mainly methane, in the controversy over the Tory leadership race over the past few days, but it is probably too early yet for such a calculation? I would like to turn to some specific chapters in This Common Inheritance, and in particular to a subject which you touched on briefly when you talked of an accepted database for Europe. I am interested certainly in chapter 1, sections 16-18, where you talk about the need for sound scientific data as a basis for action and the importance of the "precautionary principle". I can understand that, and in a perfect world, of course, we would all like that, where we

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Dr Howells Contd]

would have time to gather the statistics but we would also be able to take action on contemporary problems. Can those two ever come together satisfactorily, or will we always continue to have to take action, and possibly make mistakes in taking that action, rather than leaving problems to fester?

(Mr Patten) I do not think that there is necessarily any division, any paradox, in, on the one hand, asserting the importance of taking precautions and, on the other, arguing that you should always try to base your policy on rational judgements and on scientific evidence. I would hope that the precautionary measures that we are rightly taking, for example in relation to greenhouse gas emissions, were based on sound science rather than shots in the dark, so I do not necessarily think that the two principles are at odds. I think most of us now accept that you cannot wait until all the evidence is in before starting to pay an insurance premium, before starting to take precautions. There will be occasions when I think it is very difficult to gauge precisely what is the best course of action on the basis of the science. Let me take an obvious example which, Sir Hugh, you and I and other members of the Committee have discussed in the past; that is, the way historically we have dealt with about 17 per cent of our sewage, ever since the Victorian times, by discharging it into our coastal waters. You will still find a large number of water environmentalists who will say that that is a totally acceptable environmental option. When you are talking about sewage sludge, you will still find many environmental scientists who will say that, in environmental terms, the balance is very even between, on the one hand, other means of disposal of sewage sludge and, on the other, dumping it in the sea; but it seemed to me, looking at the balance of the argument, that the Committee was right to tip that balance in favour of taking precautions. Let me, secondly, consider the matter in relation to the biggest issue that any of us will face on the environment, almost the biggest that any of us will face on anything, CO₂ emissions, greenhouse emissions, the consequences for global warming and climate change. It is true that we do not know everything there is to know about the tolerable levels of climate change; it is perfectly true that the relationship between the work of the First Working Group of the IPCC on the Science of Climate Change and the Second Working Group on Impact covers a lot of areas where we are not absolutely sure what is happening. That said, it seems to me that there is quite enough evidence in for us to agree that between now and that date when the science may be more perfect—the IPCC Working Group 1 talks about 2005—we should take measures because they are justified, on the whole, in their own terms, but they are also justified by what we know already. I do not think that you have to dot every “I” and cross every “T” before you make an environmental decision, but you obviously want more “I”s dotted and “T”s crossed than not.

Chairman

13. If I may intervene here, we are in danger of getting into an area of semantics and

misinterpretation. In fact, what you are saying is that you must take a balance of probabilities and make a political judgement on the balance of probabilities and not wait for absolute scientific justification for the action you are taking because you may wait for ever for that—to get something proved in laboratory conditions. The “precautionary principle”, as understood certainly in the Scandinavian countries, is not just to take precautions or act on a balance of probabilities, it goes much further: if you do not know, you do not do it. In other words, the balance has moved right over to requiring absolute scientific proof that a thing is safe, and if you have not got it you do not take the risk. That is how the “precautionary principle” is interpreted by some of our colleagues in Norway, Sweden and Denmark and it is somewhat different from the interpretation that you have just put on the phrase, Secretary of State, and we can run into great difficulties in international discussions unless we agree our terminology?

(Mr Patten) That is right, of course. I am sure you will accept, though, Sir Hugh, that there is sometimes a slight difference in the application of the “precautionary principle” when it comes to particular sectors in other countries. I observe, for example, that in Norway the “precautionary principle” seems to have a rather different application when you are talking about slaughtering whales; I observe that when it comes to energy and you try to apply the “precautionary principle” in Sweden, for example, you start to run into some difficulties when, on the one hand, you are trying to produce a policy which stabilises CO₂ emissions, while, on the other, you are saying that you will have to do away with nuclear energy, which is at present providing almost 50 per cent of your electricity, and you will not have any more hydro-electric schemes because you do not like them either. When you start actually applying the “precautionary principle” on the ground in other countries you find that they face up to precisely the same issues of balance and judgement that we face up to. I do not mind the fact that we sometimes seem rather more prosaic, and perhaps rigorous, in trying to work out what the “precautionary principle” means. Let me give you one very germane, present example. I am keen, because I am persuaded of the nature of the dimensions of the problem, that we should play a substantial role in trying to negotiate a global framework convention on biodiversity, but when I start to consider the science which should lie behind such a convention I am aware of the fact that there is a great deal that we need to work out in rather more detail, so I am trying to bring together scientists and economists to work out what it is precisely that we should be trying to preserve, what precautions we should be trying to take. I gave a lecture last night to the Natural Environment Research Council on this issue. That is an example, I believe, of where you do need to work out with scientists precisely what are the precautions that you properly need to take, but I totally accept what you said about the boundaries having been pushed back by the consequences of us not taking sufficient precautions in the past. Two very good examples: it is obviously a human tragedy

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Chairman Contd]

that the same man was responsible (a) for inventing CFCs, and (b) for proposing that we should put lead in petrol; those were both scientific developments which have done incalculable damage and, alas, we did not take sufficient precautions to find out about them at the time.

Dr Howells

14. A smaller point in scale, perhaps, but an important one, and not just geographically, you have decided to put separate sections in the back of the White Paper for Wales, Scotland and Northern Ireland. There are some very nice photographs—I have to say that I hardly recognise my own country—but I must say that it generated a little confusion in my own mind as to your own picture of just who is responsible for these cross-border questions of pollution control and monitoring, and so on and so forth. Do you think that perhaps it was a slight tactical error to put these sections in the back of the book?

(Mr Patten) No, but you will know yourself, from producing any sort of document covering the United Kingdom, whether a policy document, a manifesto or a White Paper, that there is always a lively discussion about the way in which the interests of the component parts of the United Kingdom should best be addressed. I do not think that it was wrong of us to have separate chapters dealing with the specific responsibilities of the territorial departments. For example, the water regime is different in Scotland from that in the United Kingdom, the industry is managed and operated and owned differently, so it is appropriate to have different treatment. The fact that we have dealt with environmental matters in that territorial way does not, I hope, give anybody grounds for fearing that we do not co-ordinate adequately environmental policy at the United Kingdom level. We need, of course, to do that for international negotiations, we need to do that in other sectors as well, where we are trying to make coherent policies which will affect all parts; I believe that the Ministerial Committee, chaired by the Prime Minister, will help to ensure that degree of co-ordination and coherence. Sir Hugh and I were talking earlier about single-issue politics. What I think people have got to increasingly recognise is that environmental policy is not single-department policy-making. Co-ordination between my Department and the environmental departments of the territorial departments is, of course, important; it is even more important, or as important, that a concern for environmental impact should be embedded deep in every Whitehall department, and it is no criticism, I think, to say that there does need to be a revolution in that respect and I think we are in the early Bastille days of that revolution.

15. I do not want to make a big thing of this point, but when the sludge comes down the River Severn from the West Midlands and ends up on the beaches of Barry Island, or when radioactivity, albeit residual, happens to be washed up on the beaches of North Wales, never mind the cloud from Chernobyl falling over North Wales, not much attention is paid

to those borders, and I am still a little concerned, perhaps, that within the United Kingdom we could be creating some sort of national ghetto, as regards certain important parts of this legislation here?

(Mr Patten) I will not surprise you by saying this, but I do not believe that is a fair representation of what is in our White Paper, or what will be the results of legislation, but I think you touched on an extremely important issue where a different sort of populism obtains, a sort of populism for which my distinguished predecessor added a word to the English language. It is particularly obvious when you are looking at waste policy. Every time there is a proposal for a waste tip or for a waste incinerator the local community arrives rapidly at the conclusion that there is only a waste incinerator there because the rest of the country—indeed, sometimes it is asserted, the rest of the world—is sending its waste to that particular village or town. We do need to encourage people to recognise—it is the same as when one is talking about housing development in the South East of England—that as a national community we have to share responsibility for dealing with waste, for dealing with other problems, and that we are not trying to push all the problems onto the shoulders of one particular sector of the community, whether geographically or in other terms. It is going to be quite difficult for us to get that broad acceptance of everybody taking their share of responsibility and I guess that is one reason why this Committee asserted with such vigour the case for regional waste organisations rather than basing waste on statutory bodies at the county level.

Chairman

16. May I just correct you on one thing, Secretary of State. Your distinguished predecessor did not invent the acronym NIMBY (Not In My Back Yard), to which you have just referred; you will find it in print, for the first time in the United Kingdom, in the Report of this Committee on Radioactive Waste, published in 1985. We do not claim originality; we brought it back with us from the United States, where we discovered that problem was even greater than it was here, and your predecessor adopted that with great alacrity and used it frequently.

(Mr Patten) Thank you very much indeed, Sir Hugh. I am not sure whether he will be pleased or not to discover that he was not the originator of it.

17. He is aware of it, because I then offered him, when we were discussing it on the floor of the House, NIMTOO (Not In My Term Of Office), another acronym that we brought back.

(Mr Patten) He certainly gave it even wider notoriety than it would have otherwise enjoyed.

Mr Holt

18. I want to ask a supplementary question, based on the statement which the Secretary of State has just made, because it is quite important. In my area, at this moment in time, as you know, inquiries are going on into toxic waste disposal applications, which came in in large numbers. A few months ago I caused quite

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Holt Contd]

a furore when I suggested that perhaps an area like Gloucestershire should be looked at as somewhere to put a toxic waste disposal unit, and your illustrious predecessor made a statement on the floor of the House saying that he would not allow a toxic waste disposal unit in Gloucestershire. If there is to be regional disposition and fair shares for all, as you have now stated, are you backtracking on your illustrious predecessor's statement, or are you wishing to think about it, because we in the North East would be delighted to know that the concept will be "fair shares for all" and that there will be consideration given to applications from places like Gloucester?

(*Mr Patten*) As you know, whenever I comment on any issue where there is a planning application extremely well-paid silks are hanging out of the upper circle waiting for me to put a foot wrong which will further increase the refreshment which they already enjoy, so I must be very cautious in what I say about the three planning applications to which you quite understandably referred. I take it that you might not be surprised to know that on the last three regional visits that I have made, to the North East, to the West Midlands and to the South West, I have been criticised or attacked on each occasion on the grounds that we were trying to site all the toxic waste incinerators in the country in that particular region. It is an argument which is a fairly familiar one. All that I will repeat is that you are wholly correct in saying we have to recognise that these are national responsibilities which need to be shared equitably on a national basis and that one cannot expect one particular community to take more than its share of responsibility, but the incinerators have to go somewhere. I hope, for instance, that all those who argued so vociferously for ending sewage-sludge dumping will be equally vociferous when it comes to supporting the planning applications for individual incinerators.

Mr Lewis

19. Secretary of State, you have just mentioned the inter-departmental position regarding environmental impacts; that leads me on nicely to paragraph 18.3 of the White Paper, where you stated that the Standing Committee of Cabinet Ministers who worked on the White Paper is going to stay in being and meet regularly. What specific environmental issues will the Committee deal with, is the first question, and has it met since the White Paper was published?

(*Mr Patten*) As you will know, I would run foul of the existing rules if I were to say anything precise about meetings or agenda of Cabinet Committees. I think it is only in recent years that we have even (I must be careful here what I say) conceded the existence of Cabinet Committees and membership of Cabinet Committees. I will disobligingly duck your second question and say that the Committee will meet whenever it needs to meet and answer your first question in fairly broad terms. The two most obvious responsibilities of the Committee, which the Prime Minister chairs, will be to oversee the implementation of the over 200 initiatives which flow

from the White Paper. A second, important role for the Committee will be to be the focus of discussion about the development of environmental policy as we approach international negotiations. That is going to be an increasingly onerous burden within government, as the pace of international negotiations on matters like greenhouse gas emission and CO₂ quickens and as the complexity of the problems that we have to cope with internationally becomes all the greater; but you can be assured that that Committee and associated ministerial arrangements are both new and necessary and will find themselves increasingly under a good deal of pressure from events.

Mr Squire

20. Would you see that same Standing Committee taking responsibility for what in the past would have been bilateral discussions between, say, your Department and Transport or your Department and Energy on the obvious points of common consent, no doubt, most of the time, and interest all of the time, or would they continue to be outside that sort of Committee?

(*Mr Patten*) Let me give you a practical example of how I think the Committee would work in relation to departments. We shall be undertaking, as part of the White Paper, a study with the Department of Transport on land-use planning and the effects of land-use planning on transport choice, which itself has a considerable effect on greenhouse gas emissions. It will be for the Departments of the Environment and Transport to undertake that study; it will be for the Prime Minister's Committee to ensure that that study is undertaken and that its conclusions are sensibly acted upon.

21. You have more or less answered my second question, Secretary of State. Having said that, I will avoid the cricket analogy; we will read between the lines on what you said earlier when you got the bouncer. Can I press you a little bit on the inter-disciplinary nature of the business that we are talking about. I was glad to see that the White Paper was printed on recycled paper—that was the first thing I looked at, as most did—but one of the things that I was disappointed about was that there was not one single word about open-cast coal mining, which is one of the most worrisome environmental impacts that most Northern areas, anyway, and the Midlands, currently experience. It seems to me that the inter-disciplinary approach there has to be extremely important because of two things: one, the high sulphur content of open-cast coal contributes substantially to atmospheric emissions, which other parts of the White Paper seek to address, and also the horrendous impact of the actual coal mining in the areas where this takes place. What interests me about this, and it is something that I will be pursuing, obviously, in other fora, is the impact of that where other problems exist, such as new roads, toxic waste incinerators, and all the rest. This brings us back to how seriously the ministers that you have identified, in the Departments, will take these issues, accepting the fact that the Prime Minister is chairing the

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Squire Contd]

Committee; the Departments of Health, Defence and Transport have traditionally been little concerned with environmental issues, under all governments, I think that is fair to say. I am sorry I am going across a whole range, but I would like you to respond to what I think was a particularly sad omission from the Paper?

(Mr Patten) You will forgive me if I am not as familiar with every line and paragraph of a long document as I should be—it is like trying to memorise “Jane Eyre”—but I think I am right in saying that in the chapter on land-use planning, on page 87, paragraph 6.33, we refer to the guidance notes which we have circulated recently on open-cast mining and related issues, and there has, of course, been a lot of debate and public consultation with local authorities, principally those counties where open-cast mining has been a big issue. I do think that we have made considerable advances in policy in dealing with open-cast mining, for example, in the whole planning control mechanism, and I also think that in recent policy planning guidance we have taken steps to ensure far more concern from the initial stages of planning about rehabilitation, and about controlling noise and emissions to air in a way which is more environmentally acceptable. Of course, I totally understand your concern about the issue, which does arouse considerable public concern. I very much hope that the policy planning guidance that we have been giving is an adequate reflection of that concern, but we must obviously continue to do all that we can to make the control system more environmentally-friendly.

Chairman

22. It is a pity that open-cast mining was not mentioned specifically in the White Paper. A reference to “a booklet on the winning and working of minerals without excessive environmental disturbance”, which I assume is the reference in paragraph 6.33 to which you have just referred, does conceal that rather cleverly, and perhaps a nice picture of an open-cast mine might have emphasised the point; but, never mind, it all fits in?

(Mr Patten) We will, of course, as we say, be issuing further guidance notes on related mining activities and will, of course, bear in mind the observations of this Committee when we do so.

Mr Lewis

23. Secretary of State, where those applications for open-cast coal mining coincide with other environmental impacts—perhaps a motorway, perhaps a toxic waste incineration plant—that is the area where I believe the inter-disciplinary approach should be exceptionally pursued. There is no doubt that you will get from different directions representations on all three and it is when those different representations have hit your desk that interests me. I would certainly like to know more about the inter-disciplinary approach from there on, and the power behind the decisions that will be made?

(Mr Patten) As you know, another institutional change that we have made is that a minister with

particular concern for the environmental impact of his or her department's responsibilities is appointed in every department. In the case of the Department of Energy, the Secretary of State for Energy himself has nominated himself as the minister with that responsibility and I am sure that he will take a close note of what you have said on this particular matter.

Mr Holt

24. Do you, Secretary of State, still think it is a good idea that the disposal of waste from mines should be in the hands of the Ministry of Agriculture, Fisheries and Food, because our beaches in the North East are heavily polluted from this source, and would it not possibly be better if when you have one of your own departmental meetings you asked them to give you the responsibility for that so that the Department of the Environment, which is really responsible for pollution, stops the way in which licences are issued *ad lib* to British Coal?

(Mr Patten) I think the system works pretty well, and you will know the decision which MAFF have taken about dumping that mine-spoil on beaches and the five-year limit which they have placed on that activity. We certainly worked very closely with the Ministry of Agriculture over the decisions that we took on sewage-sludge dumping and I do not think we have had any difficult frontier problems with them in those matters. I do not obviously lack responsibilities and I am not imperial about trying to take over more things, but where there need to be adjustments, for example our recent acquisition of responsibility from the Department of Transport about marine archaeology, where there do need to be changes in order to clear matters up, we can make those changes as we go along.

25. I am sure you will appreciate that there is a great deal of scepticism in the North East that the five-year limit will be kept, because every time applications are made for the licences to be renewed for dumping they are granted; they have never been refused and I do not believe, until such time as they are refused, that action will positively be taken?

(Mr Patten) What those who are dumping are required to demonstrate is that there is no acceptable land-based alternative, and if they do not their ability to dump will end in 1995. I hope that your scepticism about that time limit is ill-founded.

Mr Holt: So do I.

Mr Lewis

26. On Crown Immunity, Secretary of State, in the inquiries that this Committee has made over a period of time it has become aware that Government Departments have been amongst the worst polluters. In paragraph 11.59 of the White Paper, you are talking about taking away Crown Immunity from hospitals. Do you intend to do that with other Government Departments; MoD, for instance?

(Mr Patten) As you will know, under the Environment Protection Act—and this reflects, I think, what we have quite properly been doing in other areas, so far as Crown Immunity is

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Lewis Contd]

concerned—the regulations apply to everyone. There are particular procedural problems about the Crown prosecuting the Crown, but if a statutory body, a Government Department, the National Health Service, is in breach of a particular regulation the matter can be taken to court and that can be made clear; and I think there is no question that in those circumstances the embarrassment would oblige compliance. We are also making clear that Government Departments, with one or two rather obvious exceptions, have to comply with the procedures on access to public information, which again I think is important and wholly justified; but I would not lay particular claim to having done that only in the environmental area, I think it reflects a change in Government as a whole, which is much to be welcomed.

Chairman

27. Mr Lewis just mentioned the Ministry of Defence. It has been reported to us that there is some very dangerously-contaminated land in the ownership of the Ministry of Defence and I have written recently to the Minister about this matter and I am awaiting his reply. Is it something that has come to your attention; are you pursuing it in any way?

(*Mr Patten*) It has not, so far as I know, come to my own attention; it may have come to my Minister of State's attention. Perhaps I can respond to you on that by letter after this meeting.

Chairman: We are most grateful.

Mr Bellingham

28. I should start by declaring an interest, because I work as an adviser to NAWDC, which will be well-known to you, although I should stress that it was not I who invited Bryan Gould to their lunch which is taking place later today. You mentioned earlier the European Environment Agency and it has been made quite clear that it is seen as a means of ensuring reliable and consistent data for policy-makers. Is it still the view of your Department that it should just be concerned with data collection and standards, or should it perhaps have powers of enforcement if that data proves to be inadequate?

(*Mr Patten*) I am reminded of Mrs Beaton's advice: "First catch your hare". We have been strong supporters of the establishment of the European Environment Agency; we have been strong supporters of developing an adequate database, as I said earlier, for European environment policy-making; we have been strong supporters, as we made clear at a meeting between the European Community and EFTA again the other day, of ensuring that there is a proper relationship between non-Community countries and the Environment Agency so that it can take account of the fact that interlocking environmental concerns do not stop at the Community frontiers. It is ludicrous to talk about, for example, vehicle emissions in the Community but not be prepared to look at the situation in Switzerland or Austria, let alone the Nordic countries; so we want to see an Environment Agency. We have great difficulty in getting one set up

because of a tiresome argument within the Community over the siting of the Agency and of the siting of other institutions, and I am afraid that the Environment Agency is being held hostage to decisions being taken on the siting of other Community institutions; so my own priority is to get the Agency set up and to get it working and I have no view at present on whether or not we should extend its powers. I have to say that while there are precedents in the Community—for example, the Fisheries Inspectorate—there are Member States which I think would have concerns about an enforcement role for the environment Agency, but my own priority is at present to get the institution actually set up and running.

Mr Squire

29. Would you accept that, in the absence of any agreement across Europe on standards—let us take water standards, for instance, where it is widely recognised, I think by members of this Committee, that, whatever the official figures suggest, unofficially there are major breaches within several European countries—in the absence of anything like that being able to be developed by this Agency, that must surely put a big question mark over any European comparisons for almost any purpose?

(*Mr Patten*) Yes, I think there are two particular problems with the provision of statistics. First of all, there is the provision of statistics in time and preferably annually, and we know very well that the statistics with which we are being compared, providing our statistics annually, are in some cases two and three years, and more, out of date. Secondly, if you go to the Water Research Centre, one of the more interesting developments in which they are involved is monitoring the monitors, or testing the testers, and discovering just how large are the variables in the test findings which they achieve, which they look at. When they go back and check figures against samples they very often find the most enormous variations, so one not only needs to have regular figures but one needs to check the way in which the figures are actually arrived at, and it is something with which I have offered to help; I think we can play a significant role in developing that. I do not want to suggest, by saying that, that every range of comparators or every range of figures would necessarily show us in a perfect light, they would not, but what I think they would do is to show that we are much better placed than is sometimes argued, and I think that they would help to make the debate a more sensible one.

Mr Bellingham

30. Secretary of State, you mentioned "subsidiarity" a moment ago. Incidentally, I very much welcome the robust stance you took on the Birds Directive, you will certainly get the vote of every Norfolk farmer, but what good that will do in Bath I do not know. Can we perhaps apply the matter of European labelling for environmentally-friendly products: what is your view on this; do you think it is a good idea? If it does not get off the ground, should

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Bellingham Contd]

we have our own labelling scheme, a national labelling scheme, and perhaps the possibility of a combined United Kingdom-German labelling scheme, if a European-wide labelling scheme does not actually get going?

(Mr Patten) I think we were right to take the initiative, for it was our initiative, to try to develop a Community-wide labelling scheme, for the simple reason that with the creation of the single market, with their products moving more easily across frontiers, it plainly makes sense to have a labelling scheme which can satisfy consumers on the same basis from Bath to, I was going to say Boulogne but that is not far enough, to Bologna; that makes sense. If we have not got a Community-wide labelling scheme in place by the end of next year we will go ahead and produce our own national labelling scheme, and we have got a very good and distinguished committee which is advising us on a cradle-to-grave scheme. I repeat that I would like to see it on a Community-wide basis, but if we cannot do that then we will go ahead in Britain.

Mr Bellingham: Thank you, that is very encouraging.

Chairman

31. Would that scheme lay down norms, criteria, standards that have to be attained in order to be able to use the label on products, presumably, and would there be some mechanism for policing?

(Mr Patten) Yes. I think we have all been considering a voluntary rather than a statutory code, but of course there is related the issue of trade descriptions legislation, but in the first place we are looking for a voluntary code which can be properly regulated and monitored by the industry and retailing and consumers. I think, myself, that retailers in particular would very much welcome such a development. I think that they are aware of confusion among their customers, from time to time, about the environmental claims that are made.

32. We can avoid the situation of an aerosol containing a cleaner, claiming that it is environmentally-friendly because the propellant contains no CFC, but the cleaning agent itself is a very heavy CFC?

(Mr Patten) Yes, I think that is precisely the sort of thing one wants to avoid. One wishes environmental claims to be more substantial than the labels on which they are printed.

Mr Holt

33. I could say, as a diabetic, get the labelling on bottles which say "contains less sugar" because it never says less than what. My movement now is from Europe to the world, but before I do that I would just like to ask one maverick question. Why does the Government continue to allow houses to be built which do not have loft insulation, are single-glazed and do not have wall insulation, all of which most people put in afterwards at great expense? If we are serious about energy conservation, why do we not just do that; we do not have to wait for Europe, we

do not have to wait for anybody else, we can just turn round tomorrow and say, "In future, if you are going to build a house, the planning regulations will insist that these are incorporated in the building", and the cost of them spread over a 25-30 year mortgage would not be all that great, anyway?

(Mr Patten) As you will know, we have just revised with the construction industry the Building Regulations, or "Building Regs", as they are known in the industry, and a consequence of that revision should be—I hope I am recalling this accurately from memory—an improvement of about 20 per cent in fuel efficiency. We have said that we intend to monitor those Regulations over the next couple of years and will then come back with further proposals with the industry as soon as it seems to be possible. The industry has argued that we have taken things as far as we should or properly can at the moment, in terms of safety; that is their view. There are, of course, particular issues involving condensation and heating and efficiency which always cause concern, but I have to say, having looked with great interest at the work of the National Energy Foundation in Milton Keynes, having looked at their energy auditing, having looked at the proposals for energy labelling of homes, that I think we have a considerable distance to travel in this country before we can be remotely satisfied with our performance. I do think that the National Energy Foundation is doing a terrific job and I hope that they will be able to work increasingly closely with the industry and with home owners, purchasers and tenants. We are playing our part, I hope, by starting a scheme with local authorities of pilot projects to try to increase energy efficiency in the publicly-owned housing stock.

34. The Overseas Development Aid Minister was in front of us just a few days ago and we were discussing what has been the main purpose of this Committee for some time, which is the destruction of the rain forests and the fact that they could be lost for ever, and Mrs Chalker put a figure on it of about 10 years if the problem is not tackled. Is this a figure with which you would agree?

(Mr Patten) Yes, I think it is a figure that is broadly accepted internationally. If you are looking at destruction at about 20 million hectares a year, which is reckoned to be the present figure, then you are talking about 10 years to "wipe-out". As the Committee will know itself, the issue is not particularly one of where existing forests in developing countries stand in relation to where they were some time ago; for example, there is still overwhelmingly the same Amazon there as there was when the first Portuguese explorers arrived. The issue is that rate at which that forest is now being depleted, and all of us, I am sure, are pleased that the depletion rate in Brazil appears to have fallen, according to the latest remote sensing figures, partly I think as a result of getting rid of tax breaks and subsidies to encourage deforestation, but we have still got an enormous distance to go globally in putting together a more viable forestry strategy for the world. I think it is immensely important, in relation both to climate change and global warming and in relation to biodiversity.

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Holt Contd]

35. My second question relates to biodiversity. I wonder if you can tell us more about the efforts of the United Nations Environmental Programme to agree on a global convention for biodiversity?

(*Mr Patten*) Rather than go in great detail through the speech that I made last night to the NERC on biodiversity perhaps I could table the text for the Committee¹. It represents—and I hope the Committee will not be disappointed—the state of our knowledge on the subject and indicates the areas in which we think more scientific work and more work by our economists needs to go. My own economic adviser, David Pearce, has done a lot of ground-breaking (though not in a forestry sense) work on this particular question, arguing, I think wholly plausibly, that we should base a policy on the protection of eco-systems rather than particular species. There is a terrific contribution which this country can make, partly through our existing scientific institutions, from Kew to the Forestry Institute at Oxford, to the Commonwealth Potato Institute in Scotland (surrealistically named), from that to work on the ground. I think I am right in saying that—these were the figures certainly when I was at the ODA—about £25 million-worth of projects which can loosely be identified as supporting biodiversity are in place at the moment, and that we spend as a Government in support about £15 million on science related to biodiversity.

Chairman: We will certainly accept your speech of last night as an answer to that question, in view of the pressures of time upon us, and if there are any supplementary questions which arise perhaps we could deal with that by way of correspondence.

Mr Holt

36. I have just one supplementary question, Chairman, in the light of the answer which I have been given by the Secretary of State, and that is to say that the Minister's statements are very good and worthwhile, but how does this square up with the run-down in the number of specialists in the subject of biodiversity at the British Museum?

(*Mr Patten*) I would need to have notice of that question, not least because my own Ottoman Empire does not actually embrace the British Museum, but perhaps I can respond to that point as well.¹ One thing that I did not mention was the United Nations Environment Programme itself. It is, of course, going to be at the centre of work on biodiversity and the establishment of an international agreement, a convention. It is under tremendous pressure at the moment because of the large number of environmental matters which are being discussed internationally, therefore we thought it right, as the Committee will know, to increase substantially our funding of UNEP; we increased the funding from £1.25 million last year to £3 million this year and we will be increasing our grant to UNEP to £4 million next year, which will certainly make us one of the largest contributors.

Mr Jones

37. Can I ask you about your Gulf crisis in your Ottoman Empire, namely the gulf between the target that some of our European colleagues wish to set for stabilisation of greenhouse gases and that supported by the United Kingdom. There are obviously possible explanations for this; either we are taking the need to stabilise less seriously or, alternatively, they may be and are in the realm of gesture politics rather than seriously meeting those targets. Perhaps you would like to give me your thoughts as to which of those it is, or perhaps an alternative explanation?

(*Mr Patten*) Certainly. We have always argued that the important thing is that everyone should have a viable programme for stabilising CO₂ emissions and for reducing greenhouse gas emissions; and that, because of the nature of their economies, because of their fuel mix and for other reasons as well, different countries will be able initially to move at different rates towards different sorts of target. As soon as you start talking about targets you run straight back to that Professor Joad question that I mentioned earlier, and it will not surprise you that the ways in which different countries seek and choose to define their targets bears a close relationship to their own particular fuel mix and to the impact of transport on their economies. For example, the French, I think, are very keen on using a target which is based on tonnage emissions *per capita*; that may have something to do with the fact that 70 per cent of their electricity comes from nuclear power. Others are in favour of taking account of the relationship between energy and GNP; that, for example, would I guess be an approach which the Japanese would understandably favour because they have an extremely good energy efficiency record. Others would argue for taking total emissions as the target. I repeat that the targets which individual countries prefer inevitably bear some relation to the particular problems with which they have to try to cope. Probably the most difficult part of international negotiations on CO₂ emissions will be the discussions on how we can best allocate targets and how those targets can best be defined. Now I come specifically to the European Community. Within the European Community, according to the returns given in October to the International Energy Agency, six Member States have set out programmes for stabilisation or reduction of CO₂ emissions; six Member countries have not yet done so, according to the International Energy Agency. However, the whole of the European Community has signed up to a programme to stabilise CO₂ emissions at 1990 levels by the year 2000, while allowing Member States to pursue their own programmes and underlining the integrity of our own programme to stabilise at 1990 by 2005. If we, in practice, do better than that I shall be delighted but that, for us, is a pledge rather than what one or two other countries call an "orientation" target. We intend to do that and we intend to discuss closely with some of our other colleagues, who have themselves specified targets, like the Dutch, whose work I repeat I very much admire, and the Germans, how we can respectively best achieve our targets. There will be some Member

¹ See Annex, p.19.

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Jones Contd]

States who will point to their own particular circumstances as reasons for going slower, or perhaps conceivably faster. One thing that people will point to, and it is very often raised in relation to our own targets, is car ownership and usage. It is quite instructive to compare car ownership and usage in this country with that in comparable European countries where one sees both car ownership and usage, in many of them, a great deal higher than here, so conceivably there is more to achieve through greater energy efficiency in cars or, dare I mention it, more choice between cars and public transport. We very much hope, on the back of the European Community's historic decision, which had a great impact at the Second World Climate Change Conference, and on the back, too, of the agreement that 137 countries reached at Geneva, at the Second World Climate Conference, that at the very least we can sooner rather than later get every country signed up to a programme. That seems to me to be the way of the first step forward, and from programmes in every country targets will emerge. I think it is a more sensible way of proceeding than dreaming up a target and then working out whether or not you can achieve it.

38. Is there not a dichotomy between two strategies: the strategy relating to energy use and that related to erosion of the rain forest? We rightly want to see much lower usage rates of the rain forest and the stabilisation of the biomass there, and hopefully even reversing the trend; and I must say, and I am sure other members will confirm this, that the United Kingdom was widely praised in Brazil when we were there for the part we are playing. However, if we are saying to the Brazilians and to the West Africans and to the South East Asians, and so on, "This is what we think you should do" and at the same time we are parading a lack of action in terms of fuel use in Europe, never mind North America or other developed countries, how can we expect them to take the problem seriously?

(*Mr Patten*) I think that is an extremely fair point and is a reminder of how seeking to proceed by hectoring one another is not necessarily the best basis for environmental policy. I think one reason why we were able to conclude a good environmental agreement with Brazil was because we had not been identified as one of those countries which had been slagging-off the Brazilians for their record, even while not having a perfect record oneself. I recall the then Brazilian President saying to me that he had just received a tremendous lecture from a group of visiting American Senators on the future of indigenous tribes, and he said that if he had had to receive a lecture from anybody on the future of indigenous tribes he was not sure he would have chosen a group of American Senators from whom to receive it. When you look, in Europe, or North America, at our record on deforestation, we have to be pretty careful about whom we give lectures to; of course, the same is true with energy efficiency. I think mentioning Brazil—you could have done the same with other countries, China, India, Mexico—is a reminder to us of how imperative it is going to be to associate those countries with the drive for greater energy efficiency. We have to ensure that those countries can grow sustainably without, on the one

hand, producing CO₂ which will make the efforts of the rest of us nugatory, or, on the other hand, we have got to stop them being put in a situation in which they have to choose between greater prosperity or a cleaner environment; I think it should be possible for them to manage both. I am more familiar recently with the figures for China, and if you look at the Chinese situation, in terms of *per capita* emission of CO₂, China has figures which I think are below those of Chad; they are incredibly low. However, if the Chinese were to double their total emissions over the next 10 or 15 years it would make anything else we did in the developed world seem pretty worthless, so we do need to ensure that our aid programmes are much more directed towards sustaining energy efficiency in those countries, we need to work with them very closely on technology fixes on energy and we have to give them a good example and show, whether it is Chicago or Wolverhampton, that we are putting our light switches where our mouth is.

39. Can I ask you about a more technical point on energy conservation; as it were, putting our money where our mouth is. In fact, there is a section in here, I think it is in chapter 5, about taxation strategy, accepting that either energy prices will have to go up through taxation, or otherwise, if we are to achieve what we want to achieve; I think the word "inevitable" does actually crop up in that paragraph whereas it does not in very many other paragraphs. I can see how that can be made price-neutral for industry, because clearly other taxes could be lowered on them to compensate for paying higher taxes on energy, so there would be a price-neutral effect; but what about for the domestic consumer? It has been put to us that people, particularly on low incomes, who spend a higher proportion of their income on fuel, would have to be compensated in terms of benefits, and that would simply end up continuing the spiral because they would spend that on fuel, the same as before?

(*Mr Patten*) I think that the inevitable, long-term increase in the relative price of energy has considerable implications for income distribution, for tax policy, for benefit policy, for all the issues that you have mentioned. These are subjects on which I have views. I hope that you will forgive me if I do not share all of them with the Committee, since I am well aware of the Treasury's territorial imperative and I would not want to trespass onto grounds which are properly the Chancellor's, in relation to fiscal policy, or ground which is properly that of the Social Security Secretary on matters which relate to benefits. It will not be easy to adjust to what I repeat I think is inevitable in the long term for energy, but the sooner we start looking at the problems, as the Institute of Fiscal Studies has done, the better.

Mr Mans

40. Clearly, the Californians, Secretary of State, have gone rather further down that particular route than we have in this country. Are we monitoring, officially, in any way, what they are trying to do and whether they are likely to be successful, because I

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Mans Contd]

understand that the market for cars in California, for instance, is huge—I think the number is two million new motorcars a year, which is not dissimilar from our total—and do you think that is a good approach, that they have picked a particular solution, or think they have, and do you think it is worth our while looking a bit more closely at what they are up to?

(*Mr Patten*) Yes, I do think that we need to pick up all that we can from international experience, and my hunch is that industry is even sharper-eyed about doing this than are governments, for the very obvious reason that it affects industry's trading and export performance. I have no doubt at all that sensible regulation can help to force technology and to increase market share, and if you have a conversation, as I have had recently, with motor manufacturers I think one comes away impressed by the extent to which motor manufacturers are aware of the technological developments which will be required of them in order to meet market share, in order to increase market share. I think, at the same time, one has to be aware of the dangers of becoming too romantic about the "green consumer"; I think the "green consumer" exists but the "green consumer" and "green voter" are not always as heroic as it is suggested. I note what has happened, and not with any satisfaction, to three or four "green" propositions in American States in the recent gubernatorial and Senate elections. I also recall a recent conversation with a motor manufacturer in which he said that it was a regular part of their market research to ask panels of people what, if they could have it, they would like to spend an extra £2,000 on, for their car: a CD player, CFC-stuffed air-conditioning or a catalytic converter. By a margin of 4 or 5–1, they say, which may not surprise the Committee, a CD player and air-conditioning. One has to do more in public education and one has to do a certain amount through regulation, but you are right to say that as soon as market forces assert themselves those who are not internationally-minded perish by the sword.

Mr Pendry

41. Secretary of State, I am sure you will take it that this Committee recognises the difficulties that Government ministers have, this morning of all mornings, with the exception, possibly, of my young friend, Dr Howells, who seemed to be a bit bullish, I thought, in his approach to you earlier; but I would like to approach my questions in a kind of spirit of co-operation with which you obviously enter your negotiations with your European partners on environmental matters. I am not so sure you have not told the world how you have voted in yesterday's elections, by making that statement. I would like to gently point to a contradiction, it would appear, in Government policy, because the road traffic forecast by the Department of Transport says that it will double over the next 30 years, and this, of course, as we all know, will substantially increase air pollution emissions, especially CO₂. You outline a number of methods of improving fuel efficiency in your White Paper. Is it intended to seek to restrain this enormous predicted growth in traffic and, if so, by how much;

and does that not contradict the Government policy of trying to encourage car ownership? I think this is something with which you might address the Community, because in the graph on page 153 you indicate that you anticipate carbon monoxide emissions falling by approximately half by the year 2000. Upon what level of road traffic is that based, is the first question, and what percentage of cars have been assumed to be using catalytic converters?

(*Mr Patten*) I can scarcely do any better, in replying to the question, than by quoting what my Right Honourable friend the Secretary of State for Transport said in response to a Parliamentary Question from Mr Gerald Bowden on 15th November, when he made clear, first of all, that the national road traffic forecasts are not a target and, secondly, that they are not a target to which we are irrevocably lashed. He said, among other things: "The national road traffic forecasts published in 1989 provide a broad range of future levels of road traffic demand, which remains the best available view. The forecasts clearly might be affected by future changes in, for example, regulations or taxation, but there is no reason to change them at this stage" and he goes on in similar vein. He then says: "The forecasts do not represent a target. The Government's policy is not to meet all demand in all circumstances but only where to do so is justified, taking into account economic and environmental considerations". There are then two more paragraphs about both CO₂ and the trunk road programme and other related matters. For what it is worth, can I add my own gloss to that. I talked earlier about comparisons with car ownership and car usage in other countries and they are pretty salutary. One reason, I suppose, for higher car ownership figures in other countries is levels of prosperity. I do not think that it is proper for me, concerned about the environment though I am, to try to prevent people having the same mobility that I have; I do not think it is right to stop people purchasing cars. What I do think is wholly right is to try to ensure that the cars that they purchase and drive are more energy-efficient, to try to ensure that they emit fewer noxious gases, to try to ensure that they drive those cars in ways which are more environmentally-friendly and to try to ensure that they have a real choice between whether they use their car or whether they use some other form of transport. I realise that all those issues beg large numbers of questions, but it does seem to me that the argument is a much more sophisticated one than to treat the car as though it were the guilty party and the guilty party the numbers of which have to be sharply reduced. I am interested in looking at the car ownership figures and car usage figures in Germany, I am interested in looking at those figures in The Netherlands and France and Italy, and I do not think, when one looks at those figures, that you can possibly conclude that the reason for difference in performance in different countries is because somehow we are much less concerned about the environmental impact of cars than are other people.

42. I take that, but do you not think that you could have spelt out some measures? For instance, you draw attention both to the desirability of bus

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Pendry Contd]

lanes and the fact that traffic is most fuel-efficient when running freely at moderate speeds. How are bus lanes and traffic-calming measures, which tend to slow down private cars, to be balanced with the need to keep traffic moving so as to reduce emissions? You might say that "Red Routes" is one way, but that is proposed only for London at the moment. Surely, the most effective means of controlling speed is to make it mandatory for governors to be put on all new cars? According to Holman and Ferguson in "The Route Ahead", which is published this year, a 2.4 per cent cut in CO₂ emissions from cars can be achieved by enforcement of existing speed limits, 4.4 per cent with a strictly enforced 60 miles per hour limit and 5.8 per cent at a 50 miles per hour limit. I would have thought that that was the kind of thing that you might have considered producing by way of a remedy; or is it Government policy to use congestion, which increases polluting emissions, as a means of limiting growth in car use?

(*Mr Patten*) It is certainly not the latter. Indeed, the principal objective of the present roads programme, as I understand it, is to reduce congestion, with the impact that that would have on CO₂ emissions. You are absolutely right to point to the need for more rigorous and imaginative traffic management proposals. I think I would be unwise to offer you too many views on what is, after all, Cecil Parkinson's responsibility, but I do think that the "Red Routes" programme is a very welcome step in that direction and I know that the Department of Transport are looking at the advice that they give on traffic management to statutory traffic authorities. There is a lot we do already; I think in some of the technology of traffic management we are well up with the field. There is doubtless much more that we could do—park and ride, pedestrianisation, traffic calming, and so on—and I agree with what you say about the importance of making it easier for buses to get about if one wants more people to use them.

Mr Holt

43. In the White Paper, talking in terms of the transportation and pollution, I noticed nothing about aircraft and I understand that aircraft do pollute the atmosphere in large quantities and at a height which is possibly even more damaging than a few old bangers on the road. What is the Government's policy towards ensuring that the engines in aircraft are the cleanest possible?

(*Mr Patten*) We do have what I hope you will regard, Mr Holt, as an entirely satisfactory answer to that question, in paragraph 5.62 of the White Paper, which of course I remembered before it was shown to me. One thing we point out is that, despite what you said, and this is not to say that it is an entirely negligible problem, the contribution to CO₂ of aircraft movements is pretty small.

Chairman

44. Briefly, on three-way catalytic converters—I am not sure whether this is a question to you, although it has important environmental consequences—when we were taking evidence we

were given to understand that three-way catalytic converters did remove things like nitrous oxide and carbon monoxide but increased the amount of CO₂ put out into the atmosphere because of the additional power required; and CO₂ is now one of the gases that concern us very much indeed. On the other hand, lean-burn engine technology did seem to provide an answer both to nitrous oxides and also to carbon dioxide because of the smaller quantity of emissions that were required. British motor manufacturers were very much in favour of the lean-burn technology and wanted to develop it; in Europe, however, we are now hooked on the catalytic converter solution. Has the DOE any views on this and is there any way in which the lean-burn motor could be encouraged?

(*Mr Patten*) Particularly in view of the earlier part of the question, I wonder if I could ask David Fisk to give you a more informed answer on this than I would be able to give you?

(*Dr Fisk*) Perhaps, Chairman, the situation is not quite as dark as it may have once looked. You will recall that amongst the list of greenhouse gases which were included in the White Paper was not only carbon dioxide but also low-level ozone. One of the great advantages of the three-way catalyst is that it is a very effective attack on those reactive chemicals which are the precursors to the formation of low-level ozone. Since the debate began on the technology for engines we have begun to understand a great deal more about the balance of chemistry between the extra production of CO₂ and the general reduction in ozone. We would be happy to provide a small supplementary note¹ to the Committee to give that balance but, broadly speaking, for most sorts of mileage it is beginning to come much more equal. The original concern that the Committee had on fuel efficiency, which is indeed borne out on the most recent fuel-efficiency figures, which are now available from the Department of Transport, was that catalytic converters do at the moment consume slightly more fuel per mile than other sorts of engine technology. Nevertheless, the balance allowing for the effects of other greenhouse gases is much more attractive than first thought.

Mr Jones

45. I am rather concerned that there is a danger that regulation is design-based rather than performance-based, particularly at European level, and the trouble is that that then freezes technology. One can draw up a theoretical set of performance targets which fits neatly as a glove one particular piece of technology and thereby freeze out the development of other forms of technology which may be much more efficient and much more environmentally-friendly in the long run. Is that a perception that is at all understood by your colleagues in Europe; indeed, is it something that you share yourself?

(*Mr Patten*) Yes, it is something I share myself and I think it is a perception shared by others and I think it is a powerful argument for involving industry

¹ See Annex, p.18.

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Jones Contd]

as much as possible in discussion of standards and performance, not as a way of allowing industry to survive with easy opt-out solutions but as a way of getting the right answers. In my judgement, we not only have to do that but also need, wherever possible, to give industry longer lead-times to achieve the sort of standards we are talking about; so the earliest and fullest possible debate. Dr Fisk might like to add something to that.

(*Dr Fisk*) There is a recognition at the technical level in Europe of the attraction of standards which are more performance-based than specifying the process, for the very reasons which Mr Jones mentioned, and indeed I think the earlier discussion has touched on the attractiveness of standards which have a touch of technology-forcing in them and that, of course, is inviting an element of innovation and new approach. In general, the thrust of European Directives has been—although recognising there must be at least one feasible technology that can reach the limits—cast in a way in which it is not freezing a particular pattern of technology.

Mr Mans

46. Can I stay on air pollution and move rapidly on, Secretary of State; I would like to briefly look at acid depositions. The Earl of Caithness gave evidence to us some time ago now, just before the agreement was reached on the Large Combustion Plant Directive, and said that the United Kingdom could not agree to the tight targets for emission reductions because of our high-sulphur coal and the disastrous consequences for the British coal industry. I understand that both we and the EC accepted this argument and that Britain was given one of the lowest targets as a result. Now we understand that the electricity industry appears likely to meet this Directive, in part through the use of low-sulphur coal and natural gas rather than fitting the full 12 gigawatts retrofit of flue-gas desulphurisation equipment. First of all, can you confirm that we will be retrofitting only six gigawatts of flue-gas desulphurisation equipment and that the United Kingdom is now less strongly committed to retrofitting further FGD than the Department's evidence indicated in 1988?

(*Mr Patten*) What we are consulting on at the moment, not least with the Commission, is our paper on how we are going to comply with the Directive. I think we were the first Community country to produce a draft paper; after consultation we will be sending that paper in agreed form to the Commission before the end of the year and that will make precisely clear how we are intending to discharge our obligations. It is a matter for National Power and Powergen to determine the best and most cost-effective way of meeting their obligations. As I understand it, they are now talking about 8,000 megawatts of flue-gas desulphurisation and the work on that has started at Drax and will shortly commence at two other power stations. They are also looking at other means of achieving those objectives; for example, switching from coal to gas, which can have, of course, a considerable effect on acid rain and sulphur dioxide. The question is, how can we find the

best environmental, technological, economic way of meeting those objectives; I do not think we should all assume that there is one perfect route and that it has to be done through FGDs.

47. I understand that, Secretary of State, that the Directive did not actually require a specific technology, but as I understood it our special pleading was based upon our high-sulphur coal, and would you not agree, as a result, that we have actually changed the ground rules after we have got the lower target?

(*Mr Patten*) No. We had particular arguments about the time-lags involved with FGD for the 1993 target date, but that did not relate, as I recall to 1998 or 2003, but if my recollection of that is wrong I am sure the Secretary of State for Energy will correct me.

48. Alongside what you were saying about the soon-to-be-privatised power generators, is your Department responsible for actually indicating to them their contribution to this reduction in CO₂? Is the split known between the two power generators, because, as I understand it, previously it was just that the CEBG had a target?

(*Mr Patten*) The precise ways in which we are achieving the objective are set out in the paper on which we are now consulting, which will be tabled with the Commission, and I think the best way in which I can satisfy the Committee on that point is by showing the Committee the paper as well.

49. Can I just briefly have a look at the results of acid rain when they are allowed into the atmosphere. In the White Paper, at paragraph 11.31, you say: "acid rain probably places additional stress on trees which are close to their survival limit"; this sounds very much like the so-called "cocktail of stresses" theory which was put to the Committee by Scandinavian scientists during our acid rain and air pollution inquiries. Is it now the accepted view of your Department, is this the accepted scientific view of the effects of acid rain on trees and, if so, does the Forestry Commission also subscribe to it?

(*Mr Patten*) Yes. The Forestry Commission were closely involved in the drafting of the White Paper and they are closely involved as well in the work of the Review Groups which are looking at the moment at the impact of acid rain on trees and on forests and water acidification; they are looking at both tree health and forest and water. Those reviews will, I think, produce their conclusions early next year.

Chairman

50. They have taken a long time to come round to it, that is all I can say!

(*Mr Patten*) Yes, but I hope they will be well worth waiting for.

Mr Mans

51. On page 142 you illustrate various forecasts for air quality by the year 2003. While you anticipate removing the health risk by this date many upland areas of Britain will still be suffering actual environmental damage. What is the reason for not

21 November 1990]

MR CHRIS PATTEN MP, MR DEREK OSBORN
DR DAVID FISK AND MR ROBIN YOUNG

[continued]

Mr Mans Contd]

being able to tackle that particular problem by the date indicated?

(*Mr Patten*) The first reason is that the damaged areas will take some time to recover, even after the pollution has stopped, and the second reason, is you are talking about particularly sensitive areas, peat over granite soils; and that, I think, makes the problem more difficult as well. It is those particular issues which account for the air quality map showing those results for the uplands.

52. Along the same lines, it is conceded in paragraphs 11.40-41 of the White Paper that the growth of vehicle traffic will make the reduction of NO_x emissions more difficult, and it shows a rise in these emissions in the mid-80s to early 90s. Is the United Kingdom still on target to meet its international commitments regarding nitrous oxide emissions?

(*Mr Patten*) Yes, we are. For example, the stabilisation at 1987 levels by 1994, but obviously we are concerned to see rapid movement on the Consolidated Car Emissions Directive; we discussed it at the last European Environment Council, we have come very close to agreement, there are one or two countries which have particular problems which they want to resolve. I suspect those problems may be easier to resolve after the German elections, and I would very much hope that we could agree that Directive at the December Environment Council, which would, of course, have an impact on the problem to which you are referring.

53. Finally, Secretary of State, something that relates both to air pollution and what we were discussing a little earlier: there seems to be very little in the White Paper on diesel emissions and this seems to be an area that is causing increasing concern. Has your Department advanced any further over the last few months with the research that it was doing into

this area?

(*Mr Patten*) We have certainly taken an active part in the attempts in the Community to introduce tougher standards on diesel emissions. The argument has largely been one about whether or not to apply the 1994 United States standards. On the particular issue of research perhaps I can ask Dr Fisk to say another word.

(*Dr Fisk*) Our programme of research, of course, is to try to determine the sort of standards we could have in the future for diesels; that research is encouraging us to take a very bullish line for the type of standards we would wish to push in Europe.

Mr Bellingham

54. Chairman, on water, I just want to ask the Minister very briefly when the Water Quality Objectives are likely to be put in place? This is referred to in paragraph 12 of the White Paper.

(*Mr Patten*) They are starting to be put in place now. Perhaps I can let the Committee have a precise calendar.¹

Mr Bellingham: That would be very helpful.

Chairman

55. In view of the time, and I do know that members of the Committee have other engagements to attend, I wonder whether we could leave the outstanding questions—and the Committee will forgive me—and write to you on them and then read your replies into the record, if we may deal with it that way?

(*Mr Patten*) Certainly.

Chairman: It remains for me to express our thanks to you, Secretary of State, and to your colleagues for attending this morning and for the very full way in which you have answered our questions.

¹ See Annex, p.18.

Supplementary Notes Submitted by the Department of the Environment

(I) STATUTORY WATER QUALITY OBJECTIVES—IMPLEMENTATION

Water quality objectives, drawn up by the water authorities, already exist for rivers and, though less universally, for estuaries. These objectives reflect the differing uses to which waters are put, and are generally set on the basis of the quality classifications used in the national surveys carried out since 1958 to assess water quality. In their present form (in use since 1980) these take account of biochemical oxygen demand (BOD), dissolved oxygen, ammonia and toxicity to fish. The NRA takes account of existing water quality objectives, and of the requirements of relevant EC Directives (for example on the quality of bathing water, water for freshwater fish, and for abstraction for drinking), in its decisions on discharge consents.

The Water Act provides the means to implement a new system of statutory water quality objectives, covering all types of watercourses. As a necessary preliminary, the NRA is currently conducting the 1990 River Quality Survey, both to provide a comparison with the results from the 1985 Survey, and to provide a baseline for the setting of statutory quality objectives. In the light of the Survey, we need to complete our review, with the NRA, of the way in which different types of waters are classified. We also need to review the existing systems for setting objectives, and consider how statutory water quality objectives can most appropriately deal with the various uses to which different water bodies—rivers and lakes, estuaries and coastal waters—are put. Finally, we have to take account, as now, of the requirements of EC Directives in setting quality objectives.

There is therefore a complex matrix of issues to be considered here, and we shall want to consult publicly on our proposals. Once the framework is settled, specific proposals for quality objectives will be required to go through a minimum three month statutory consultation process before they can be established. Although the preparatory work is therefore extensive, we nevertheless aim to introduce the new system from 1992.

12 December 1990

(II) CARS, CATALYSTS AND CLIMATE CHANGE; STATUS SUMMARY FOLLOWING THE JUNE 1989 LUXEMBOURG AGREEMENT

1. As a result of the agreement reached at the Environmental Council in June 1989, all new cars will need to be equipped with fully-controlled three-way catalyst systems from the end of December 1992. The new regulations will mean very large reductions in emissions of the conventional pollutants, nitrogen oxides (NO_x), hydrocarbons (HC) and carbon monoxide (CO). They do not, however, address the emissions of carbon dioxide (CO_2) and nitrous oxide (N_2O). This note summarises current information on the overall impact of the new regulations in terms of their greenhouse gas potential.

2. Nitrogen Oxides (NO_x)

The nitrogen oxides are indirectly related to greenhouse gas concentrations because they tend to increase the background global ozone (O_3) concentration in the troposphere, and O_3 is a greenhouse gas. Reducing car emissions of NO_x will have a beneficial effect in reducing greenhouse gas concentrations in the atmosphere.

3. Carbon Monoxide (CO)

Carbon Monoxide is also indirectly related to greenhouse gas concentrations because it interferes with a natural destruction route for methane (CH_4), which is a greenhouse gas about 10 times as effective as carbon dioxide (CO_2). The breakdown of CH_4 in the atmosphere depends on attack by hydroxyl radicals (OH), which themselves are destroyed by CO molecules. Release of CO into the atmosphere therefore effectively increases the lifetime of CH_4 and hence the concentration. Reducing CO emissions therefore has an indirect beneficial effect in reducing greenhouse gas concentrations.

4. Hydrocarbons (HC)

Hydrocarbons are, with NO_x , responsible for low level ozone “smog episodes” during hot, sunny summer weather, but the impact on greenhouse gas concentrations is negligible.

5. Carbon Dioxide (CO_2)

CO_2 is the single most important greenhouse gas. In the United Kingdom, petrol engined motor vehicles are responsible for about 13 per cent of all man-made emissions. Fitting three-way catalysts to cars is likely to lead to some improvement in fuel consumption and therefore CO_2 emissions, compared to present day cars because the fuel supply and ignition systems have to be of much better quality and performance in order to ensure conditions for the catalyst to work. Catalysts do, however, preclude tuning engines for the highest efficiency, which is always a higher ratio of air to fuel than that at which three-way catalysts work. The largest potential gain in fuel efficiency of engines comes, however, from true “lean-burn” designs, which might be at

least 10 per cent more economical than cars tuned for three-way catalyst operations. Three-way catalysts, therefore, mean more CO₂ than there might have been, had lean-burn engines been permitted under less stringent emission regulations, but probably less CO₂ per car than the current fleet.

6. Nitrous Oxides (N₂O)

Nitrous oxide is a minor greenhouse gas, currently responsible for about 5 per cent of the man-made greenhouse gas concentrations in the atmosphere. Three-way catalyst cars do seem to emit more N₂O than unregulated cars, although data are still scarce. On the basis of the few data available, conversion of all the world's petrol cars to three-way catalyst operation might increase man-made N₂O emissions by up to about 8 per cent.

7. Summary

In terms of the impact on the greenhouse effect, fitting three-way catalysts to United Kingdom cars will have both benefits and disadvantages. These can be tabulated as follows:

Emission	Greenhouse Gas Affected	Greenhouse Effect	
		Increase	Decrease
CO ₂	CO ₂	X	
NO _x	O ₃		X
CO	CH ₄		X
N ₂ O	N ₂ O	X	

Through our Harwell Research Programme, we have been able to make a preliminary evaluation of the CO₂ and NO_x effects. This indicates that the CO₂ increase of a three-way catalyst compared with a lean-burn engine fleet could be about equivalent to the O₃ increase due to the extra NO_x emission of the lean-burn engine. The opposite effects of CO and N₂O within a three-way catalyst fleet, while not yet fully quantified, also point to an overall neutral impact.

8. Overall, the three-way catalyst car does not emerge with obvious severe disadvantages for the greenhouse gases in comparison with a lean-burn fleet, and many will have overall advantages compared with present day vehicles.

12 December 1990

(III) BIODIVERSITY WORK OF THE NATURAL HISTORY MUSEUM AND THE EFFECT OF RESTRUCTURING

The Natural History Museum's 1990/95 Corporate Plan envisages a loss of 100 staff posts by 1992–93 as part of a major restructuring programme. This programme is intended to strengthen the Museum's research base and increase its flexibility. The Museum is pledged to ensure that the highest standards of excellence in research are maintained. It intends to maintain a strong and vigorous taxonomic research programme with particular emphasis on environmental and health issues. Restructuring will allow research to focus on key subjects. Research effort will be concentrated into six important scientific programmes relevant to contemporary needs and issues most notably the new Biodiversity programme.

A copy of the Museum's scientific strategy document is attached.¹

12 December 1990

(IV) CONSERVING BIOLOGICAL DIVERSITY

Annual Lecture² to the Natural Environment Research Council by the Rt Hon Chris Patten MP, Secretary of State for the Environment: Tuesday 20 November 1990.

I want to focus today on the subject of biological diversity. It is a topic which is very relevant in the context of our aim of achieving sustainable development, and it is one which raises many difficult questions, political as well as ecological. As a politician, I should like to air some of these difficulties with you and to invite your response to my ideas and uncertainties.

Before I start I want, however to congratulate the Natural Environment Research Council—NERC—on having reached its 25th birthday. It has a good deal to be proud of as it celebrates its quarter century. It has played a major role in helping to bring some very important global environmental issues to our attention. There is, for example, the work of the British Antarctic Survey on ozone depletion, and its work on the global climate. I am sure that it will continue to make a major contribution to environmental science. I wish NERC every success as it enters its second quarter century.

¹ Not printed.

² Sponsored by National Power.

Physics Versus Biology

It is curious that we have such a great desire to know more about other worlds, when we seem to be so far from fully knowing, let alone understanding, what is on our own planet. We voyage into outer space, while much of the world on our doorstep remains unknown to us. I think we may have been inclined to put more effort into the physical sciences in general than into the study of biology, though it is true that the picture has changed somewhat in recent years. I know that biology is becoming more expensive, that we are using increasingly sophisticated equipment and techniques for examining and experimenting with biological material and for recording our observations. Nowadays there is big biology as well as big physics.

Our preoccupation with the physical sciences might be put down to a liking for order, for precise measurements. There is a satisfaction in dealing with physical constants and unvarying physical laws. In contrast, the study of biology seems a good deal less tidy. It has to do with change and variation and with the differences and relationships between living things. Or perhaps the reason for our preoccupation with the physical sciences is just that, like the English climate and the common cold, we have always taken for granted the plants and animals which sustain us. We assume that, like England cricket collapses, they will be always with us.

But that view is misguided. The physical phenomena elucidated by Newton and others should still hold true a million years from now. But species of plants and animals are disappearing fast, some of them before we have even registered their existence. I am told (and here is an example of how imprecise is our knowledge of the world's biology) that there may be anything between five and 50 million species of living organisms. We have only described a million or more of them. Nor are we able to be precise about the rate at which species are disappearing. The prediction that up to a third of those which now exist may be extinct by 2025 may be alarmist (it is certainly somewhat alarming) but we can't dismiss it lightly. We are squandering this treasure house at a deeply disturbing rate. It is rather as if the owner of a priceless collection of pictures were not only to remain ignorant of what he possessed but also took a knife to a Renoir or Rembrandt every other day. At least the fact that we are losing species and losing them fast has now registered on the global political agenda, although its significance is still far from clear to us.

International Negotiations

Last year, the Prime Minister told the United Nations General Assembly that we supported the need for a global convention on biological diversity. We should like to have this ready for the 1992 United Nations Conference on Environment and Development, and negotiations are beginning this very week in Nairobi under the auspices of the United Nations Environment Programme (UNEP).

UNEP plays an extremely valuable part in taking forward work on global environmental issues. Its environment fund finances the cost of new environmental initiatives undertaken within the United Nations system. We are keenly aware that pressures on the fund are increasing as UNEP responds to requests for additional work in preparation for the conference in 1992. The United Kingdom is fully committed to supporting UNEP in its important work. Last year we more than doubled our contribution to the UNEP Environment Fund, from £1.25 million to £3 million. I have today announced plans to contribute £4 million in 1991.

The political will to address global environmental problems, and in particular the need to conserve biological diversity, is undoubtedly there. But I fear that people do not yet understand fully *how* or even *why* biological diversity should be conserved.

Perhaps I can give you some idea of the sort of processes we shall have to go through to reach international consensus on biodiversity by telling you about some of the other global environmental issues on which we have been negotiating recently.

Agreement on the reduction of ozone-depleting substances will probably prove to have been one of the easier ones. Even so, it took a long time. In 1981, UNEP's Governing Council set up a working group to prepare a convention for the protection of the ozone layer. It took until 1985 to agree the Vienna Convention, but at that time, attempts to agree a protocol restricting the use of CFCs were unsuccessful. Once we really got down to it, it took five rounds of negotiations over 10 months to agree the Montreal Protocol in September 1987. And that was seen as an amazing achievement. But it was a very limited response to the problem. A comprehensive and effective agreement had to await the meeting I chaired in London in June of this year. The London meeting agreed a full revision of the Protocol and established the financial mechanism which will enable developing countries to play their part in the agreement.

We are not nearly as far along the road with our negotiations on greenhouse gas emissions, and I fear it will prove to be a very difficult process, in spite of the speed at which the preparatory steps have been proceeding. The Intergovernmental Panel on Climate Change began its work in 1988 and worked faster than I think any other similar international group has ever done before. It produced its report by the summer of 1990. The Second World Climate Conference in Geneva a couple of weeks ago agreed that global action was urgently needed and that a framework Convention on Climate Change should be drawn up.

The first negotiating session of the Convention will take place in February in the United States. There will have to be intensive negotiation over the next 18 months if the Convention is to be ready for signing, as we hope, at the United Nations Conference on Environment and Development in 1992. As with CFCs, the important part will be the Protocols attached to the Convention. These protocols will have to tackle the real issues: how are we to achieve a global agreement on stabilising or reducing emissions of CO₂ and other greenhouse gases? There is a common but differentiated responsibility for all countries to take action. The Second World Climate Conference agreed that developed countries must take the lead, while helping developing countries to make progress in a sustainable way. But all these issues have to be agreed in protocols, down to the finest detail. It is going to be a mammoth task.

Before leaving the politics of international negotiations to focus more directly on the science of biological diversity, I just want to emphasise how important I think it is that politics and science are not conducted separately but that the one is infused with the other. I am very much heartened by the current strong public concern for our environment—a phenomenon which I am absolutely convinced will prove to be a lasting one. In responding to this deep-rooted and justifiable concern, politicians must resist the lures of populism. It is imperative that we respond to problems effectively, and that means basing policy on rational thinking and on the best available scientific understanding.

I recall an international meeting not so long ago at which discussion focused on the necessary action to reduce the production and use of a certain substance. The discussion evolved into a round of competitive bidding, with each representative determined to appear more environmentally friendly than the others. When the bidding had reached the ceiling, and the target of 100 per cent reductions had apparently been agreed, the Chairman quietly pricked the balloon of pretention by asking: "Do I have a bid for 105 per cent cuts please?" He made a serious point in a humorous way: environmental diplomacy must not be allowed to become unscientific. And the more scientists become involved in the environmental debate, the more clearly we shall be able to define our objectives and the more rational and constructive the debate should become.

The convention on biological diversity could clearly run into difficulties if we cannot define our goals at an early stage. For example, there are those who want to base the convention on obligations to conserve named species or groups of species. Uncertainties about numbers of species and about the extent of species extinctions, let alone the wider ecological significance of their disappearance, are likely to pose difficulties right from the start. The key for the negotiators will be to define biodiversity. Or rather, to decide with which aspects of biodiversity the convention should be concerned. Should the emphasis be on species diversity, genetic diversity or habitat diversity? They are all important. If we took species diversity as our starting point, how comprehensive could we be? Should we try to include micro-organisms? Or viruses? There is a real risk that if we adopt the species approach our efforts will be dissipated. We need a more flexible approach, one that is workable and one that will help us to establish realistic priorities. I believe the species issue, fascinating though it is—and I haven't finished talking about it yet—is, in this context, a distraction. We should focus on the goal of conserving ecosystems and safeguarding the processes (such as the nutrient cycles) to which they contribute and on which we all depend.

Why Conserve Biodiversity?

Why do we need to conserve biological diversity? I have already touched on some of the answers.

There is of course an ethical argument. Our conscience prevents us from living easily with the idea that we are responsible for the annihilation of species. We are beginning to appreciate the saying of the North American Indians: "We don't just inherit the earth from our parents, we borrow it from our children".

We are perhaps at last turning from being predators to preservers. For too long we have regarded the world as providing an endless supply of fruit for the plucking. Indeed, it goes back to Adam and Eve. As that great gourmet Brillat-Savarin said: "You first parents of the human race . . . who ruined yourselves for an apple—what might you not have given for a truffled turkey?"

People now care about the other species we share our planet with, at least those they find aesthetically pleasing. The public outcry about the threatened extinction of whales, tigers, elephants and giant pandas is evidence enough, although I accept that my postbag is not filled with petitions to save snakes or centipedes.

You may remember the farm animals' slogan: "Two legs bad: four legs good". I don't know if it was that well-known Swindonian, Desmond Morris, or some other animal behaviourist, who took this idea further. He suggested that people, generally speaking, find animal species with two legs or four legs quite acceptable. They can tolerate animals with six legs. But there are many who feel decidedly uncomfortable about animals which have more than six legs. Zoologists, of course, are different from the rest of us. They generally prefer animals with very large numbers of legs, or, alternatively, with no legs at all!

Does Species Extinction Matter?

Does it really matter if some species die, provided enough survive? Does it matter that the dodo only survives in the pages of Lewis Carroll? Species have been continually appearing and disappearing on the whole scene, albeit over periods of tens of millions of years. And there have been periods of decline and mass extinctions in the past. But what should we be doing about the present decline? How much can we afford to

lose? Can we, or should we, try to make decisions about what might be sacrificed? Or about what to save? Although we may be reluctant to play God, we might follow the example of Noah. I will, however, not take that analogy too far. You will probably tell me that the two-by-two selection criterion was not genetically sound.

Conserving biodiversity is definitely in our economic interest. It is enlightened self-interest. Our survival may depend on biodiversity. We at last recognise Whitehead's "false dichotomy"—"to think of nature and man". You are all familiar with the argument that as natural products have been the major source of medicines and pharmaceuticals, we should be investigating the other shelves in the larder rather than sweeping things off them.

Although 75,000 plant species have edible parts, the world relies heavily on only 20–25 for agricultural production. It is rather as if a regular shopper at Fortnum and Masons were only ever to buy cornflakes and baked beans. Maintaining a reasonable gene pool for these species will help us to select and breed varieties that can cope with the effects of climate change or enable us to meet the demands of a rapidly expanding world population. In future more will also doubtless be achieved through genetic engineering. But we do not yet know enough to risk destroying the range of variation that exists in nature or in cultivation. Biodiversity is part of our life support system—we must be careful not to be the patient who switches it off.

There is another reason for valuing biodiversity and conserving diverse ecosystems. Changes in biological systems can be an excellent barometer of changes in the biosphere. By watching for changes in patterns of biodiversity and in the degree of diversity in certain habitats, we have an early warning system for the state of our environment. At one extreme, the presence and abundance of the smallest micro-organisms can indicate the quality of sewage discharges. At the other extreme, the migration patterns of larger animals, and the spread or retreat of plant species, can reflect land degradation or climate change.

How do we Conserve Biodiversity?

It is absurd to pretend that we could prevent every species becoming extinct, every habitat from destruction or adverse change. Equally, we need not give up in the face of the immensity of the task. We must not follow the old Savoyard proverb: "I have so much to do I am going to bed." We need to try to establish some priorities. The cost of preserving a whole wilderness area could be prohibitive. We do not know whether or how people can be persuaded to care as much about the thousands of species of insects in an area of tropical forest, or the many species to be found in even a single tree, as some of them seem to about pandas, for example. There sometimes appears to be an element of inconsistency in our attitude to other animals (or is it just NIMBYism?) Perhaps when we put our hands in our pockets for tigers and whales we are really trying to make amends for the loss of our own wolves and bears. But what about our attitude to slugs in the garden, or spiders in the bath?

At the end of the day how much is conserved will depend on economic and political considerations as well as on ethical or scientific decisions. But we politicians need the advice of scientists to establish sensible priorities to ensure the wise use of resources.

Conserving biodiversity is not just a Third World responsibility. Places like Kew have a worldwide reputation for maintaining living collections and herbarium material, studying and cataloguing species and providing information and expertise. Some of the material in Kew and the Natural History Museum was collected in the 18th and 19th centuries, much of it by scientists, working either in this country or in their expeditions overseas. But Britain has a great tradition of amateur expertise: expatriate administrators and teachers found time to study, record and collect the local flora and fauna (a few still do). In the 19th century, Britain collected other countries' animals and plants rather as individuals collected stamps. The legacy of this was of course mixed, but it did mean that the Victorians, with their exceptional passion for collecting, were able to accumulate vast stores of material from every corner of the globe. This work needs to be developed in ways which will help us set priorities in the 21st century.

We cannot catalogue every living species, even if we wished to, in the time available. Back in the 4th century BC Aristotle wrote that, "Anyone who is willing to take the necessary trouble can learn a great deal about all the species that exist." I fear it may be a great deal of trouble. I have seen one estimate that it would take 25,000 taxonomists working 400 years each to describe all known organisms. There are echoes here of the walrus' "seven maids with seven mops", but we should not shed bitter tears about it. We do however need good taxonomists if we are to make well informed guesses about potentially valuable species. Recent scientific advances have greatly assisted the science of taxonomy, enabling us to look at organisms and examine their relationships in new ways. So, though the extent of diversity may be daunting, the task of improving our understanding of it may not be quite so impossible as it once looked.

It is a fact that the greatest richness and variety of species are concentrated in areas like the tropical forests and coral reefs. Elsewhere, some species adapted to particular environmental conditions, in areas of relatively low diversity, may also be valuable. It is also a fact that in modern times losses of biodiversity have mostly occurred as a result of human activity, as Dee Brown reminds us in his book "Bury my Heart at Wounded Knee":

"Three centuries had now passed since Christopher Columbus landed on San Salvador, ... two since the English colonists came to Virginia and New England... The friendly Tainos who welcomed

Columbus ashore had been utterly obliterated. The white colonists chopped down the tropical forests to enlarge their fields; the cotton plants exhausted the soil; winds unbroken by a forest shield covered the fields with sand. The European destroyed the vegetation and its inhabitants—and after turning it into a wasteland they abandoned it. . . . To the Indians it seemed that these Europeans hated everything in nature—the living forests and their birds and beasts, the grassy glades, the water, the soil and the air itself.”

Some of the most potentially valuable biological material which remains is probably in areas relatively untouched by human activity. As the Jesuit poet Gerard Manley Hopkins wrote: “Long live the weeds and the wilderness yet”. The tropical and subtropical origins of many of the world’s most important crop species, and the inherent diversity of low latitudes, inevitably push us towards developing countries if we wish to maintain biodiversity. That immediately gets us into the minefield of national sovereignty, conditionality and transfer of resources. But if we in the developed world have an interest in conserving biodiversity in developing countries we should be prepared to contribute to the costs. But what costs and how much?

Economics of Biodiversity

My economic adviser, Professor David Pearce, has developed some interesting ideas to which I would like to refer. He starts from the premise that conserving biodiversity means conserving habitats. And most people seem to agree that it is sensible to concentrate on habitats. Because we do not know what species exist, or how valuable they might be, we have no choice but to adopt a precautionary approach—as an insurance policy, so that they will still be there when we want to use them. We need to identify the areas likely to contain the highest levels of biodiversity or the most potentially valuable species. This is not easy. It is in itself a powerful reason for knowing more about what is there.

Conserving habitats is potentially expensive. Some species require large areas for a minimum viable population. I am told that in a tropical forest, the individual trees of some species are scattered over a very wide area. Policing and looking after these habitats have their own costs, but it is often argued that the greatest cost lies in the foregone development use of the land, for example when forest protection displaces logging and agriculture. But David Pearce suggests that the opportunity cost in terms of development is often wildly exaggerated. Corrupt power structures, and inadequate economic assessment of alternative land uses, skew the figures. For example, a study on one part of the Amazonian rainforest suggests that the sustainable revenue from non-timber products such as fruit and latex can exceed the short term revenue from timber. Misguided or self-serving government intervention frequently prevents market forces operating to conserve biodiversity.

Nevertheless, as Jessica Tuchman Matthews pointed out (in a lecture to the Society of International Business Fellows in the Dominican Republic last year):

Individuals and governments alike are beginning to feel the costs of substituting for (or doing without) the goods and services once provided for free by healthy ecosystems . . . the price of commercial fertiliser needed to replenish once naturally fertile soils, the cost of dredging rivers that flood their banks because of soil erosion hundreds of miles upstream, (the cost of) crop failures caused by the death of insect pollinators from indiscriminate pesticide use.

Professor Pearce himself argues that in many cases we can conserve biodiversity through sustainable use of natural resources rather than the more costly approach of total preservation. We should not regard a habitat as a museum. It is not static. Habitat conservation can be achieved cost effectively through the provision of incentives to local people, such as proper pricing and land rights.

The rubber tappers of Brazil offer an excellent example of this kind of mechanism. Farmers without well defined land tenure have no incentive to care for their land. In the past this problem has been compounded by the practice of conferring tenure through forest clearance. By contrast, a practical alternative is to give local people the responsibility for using their resources sustainably. This protects the large ecosystem of the forest. In one part of the Amazon, land rights have been established and the per hectare value of rubber extraction is more than twice that of cattle ranching. By granting rubber tappers rights of use, policy makers are protecting the forests against the other uses and thereby helping to conserve biological resources.

In many cases we can achieve a great deal simply by correcting economic distortions—distortions which encourage the destruction of habitats and work against sustainable development. Removal of these distortions is not only good for ecology, it is good for the economy too. This contrasts starkly with the traditional view that conserving biodiversity means banning activities, fencing areas and punishing offenders. It also further supports the move away from a species-based approach, which involves targeting a species and then spending what is necessary to save it. Instead we target the ecosystem and accept that what is conserved will often be dictated by the feasibility of sustainable use.

The stress on ecosystems will also enable us to safeguard their wider economic and ecological functions, such as watershed protection, prevention of soil erosion, storm abatement and climate control. The diversity of these ecosystems is an integral part of their functioning.

I am aware that I have tended to focus on tropical forests. With the present audience I ought perhaps to have said more about the diversity of marine environments. I acknowledge that some marine organisms, like trees, and certain soil organisms for that matter, have an important function in the carbon cycle, fixing and locking up CO₂.

I confess that my interest in forests derives partly from what I learnt in my last job, at ODA. But my focus on forests has more to do with their key role in the inter-related global issues of sustainable development and climate change. These issues are also linked, in ways which we are beginning to appreciate, but about which there is still a lot to learn, to the question of biological diversity and the need to conserve it.

Nor should we lose sight of the fact that the impoverishing effects of deforestation—in terms of losses of food, fuel and other raw materials, as well as the indirect effects on soil and water resources—are being felt by a billion people in the Third World.

I have said little about the urgency of the task, except in the context of the Convention and the run-up to 1992. The speed with which the tropical forests are disappearing tells us something about this too. So does the rate of desertification in many parts of the world, the result of pressures put on ecosystems by our misuse of land and water resources.

United Kingdom Expertise

I believe that it is advice, technical assistance, good science and good economics which will help save biodiversity. That need not be expensive. It is also an area where Britain has much to offer.

At home we have unrivalled expertise and information on the state of the British environment, thanks to bodies like the NCC, NERC and its institutes, and the soil surveys. Our countryside survey is probably the most thorough in Europe, if not in the world. We probably also know more about our own countryside and its wildlife than any other countries. We have a respected tradition of conserving habitats and preserving landscapes. All this gives us a fund of valuable information and an enormous pool of both scientific and administrative expertise. Institutes such as Kew, the Natural History Museum, the former Commonwealth Forestry Institute at Oxford, and Imperial College have given us a reputation overseas, which is second to none.

As Dr Johnson said: “Virtue is too often merely local”. But we fully accept our international obligations to maintain genetic resources in living or deep frozen collections. The Government supports a number of gene banks including the wild species collection at Kew, the Vegetable Gene Bank at Wellesbourne and the surrealistically named Commonwealth Potato Collection in Scotland. These are part of an international network which maintains long-term genetic diversity both for applied research and for future use in agriculture, horticulture and other industries. Beyond that, many other collections are held in research institutes, universities and private companies. It is important that this material is not only conserved, but studied and experimented with so that the economic potential of its genetic diversity is explored and developed.

So we are not starting from scratch. We are fortunate in this respect to be in a position to build on the work we have done already. I think we now need to do four things above all:

- first, to establish what we know, what we don’t know and what we need to know;
- second, to understand and explain the processes which maintain biodiversity and the factors which lead to its decline;
- third, to provide a clear, scientific basis for establishing conservation priorities; and
- lastly, to establish the effectiveness and resource implications of different conservation, restoration and management strategies.

This information will help us to make the right decisions. Unlike Noah, we may not be able to save everything. It is vital that our decisions are based not on sentiment but on the best available scientific information.

To make all this happen we need to keep up our international reputation. We, and particularly you, need to think about how to make areas such as taxonomy more attractive to young scientists. I believe it was Rutherford who said, “There is physics and stamp collecting.” I do not mean to deride philately, but I am convinced that biological sciences can be considerably more interesting than stamp collecting, and at least as inspiring as physics.

I have so far concentrated on science and economics. But I want to stress the vital role of industry, which of course employs many of our brightest scientists and economists. Maintaining biodiversity has many potential industrial benefits, especially in the agricultural and pharmaceutical sectors. But all industries have a part to play, if only by ensuring that their investment decisions, their project planning and their design take account of the importance of conserving, or even enhancing, those habitats which development inevitably disturbs.

This gives me the chance to pay tribute to the scientific, educational and practical conservation work of National Power, our joint sponsors this evening. I am particularly interested in the Artificial Reef Project in Poole Bay. It has the highly commendable objective of combining a potential means of waste disposal with a modified habitat that should enhance the diversity of local marine life. I look forward to National Power's continued work in support of biodiversity. I am anxious to bring industrialists into the debate as active partners.

Seminar

Much is already happening. Many institutions have programmes of research or practical help. For example, following my visit to Brazil last year when I was minister for Overseas Development, the ODA are developing several projects in that country to understand and utilise biodiversity. The World Conservation Monitoring Centre in Cambridge is also doing valiant work in trying to put together a global database. This is in addition to the exceptional work done by Kew and the other institutions in this country which I have already mentioned. On a reasonable definition of biodiversity, current Government spending on research totals something like £15 million. To this we can add science based aid, worth getting on for £25 million, provided each year by ODA to specific projects in developing countries.

To determine whether this is enough we need a much clearer idea of our priorities and their intellectual justification. To go some way towards this I have asked my Department to organise a seminar early next year that will bring together a range of scientific, industrial and economic experts. We need to consider the questions I have already raised and how to address the gaps in our knowledge. We also need a level-headed assessment of the economic and scientific basis for our approach to conserving biodiversity.

Conclusion

In the United Kingdom we pride ourselves on acting on sound science, sound facts and sound economics—not simply following the latest slogan. I recognise the force of Samuel Butler's saying, that "life is the art of drawing sufficient conclusions from insufficient premises". But on biodiversity I sometimes think the slogans are running too far ahead of the sound facts.

So here is a challenge to the British scientific, industrial and economic community. On the ozone layer and on climate change, we have established systems of scientific, technical and economic analysis and peer review which have served us very well in our political negotiations. The IPCC and the Stratospheric Ozone Review Group show the way. Can we do the same on biodiversity? Can we set up an operation that will pull together the science and the economics? I believe that this would be a major contribution to the international debate and an excellent basis for policy development and political negotiation.

I know that I have raised a series of questions this evening with very few answers. That was my intention. Tackling the loss of biodiversity will need co-operation from a wide range of people, institutions and firms. I am anxious to stimulate a debate to help us find the best way forward. This speech is a first step and I look forward to your response to the questions raised. I want our seminar next year to be a significant signpost, and I am confident I can count on your support.

You will recall, I'm sure, Darwin's thoughts on the importance of maintaining diversity, taken from the introduction to his "Origin of Species." He noted,

"... our profound ignorance in regard to the mutual relations of the many beings which live around us... Yet these relations are of the highest importance, for they determine the present welfare and, as I believe, the future success of every inhabitant of the world."

I am sure no one here would disagree with that.

I was recently reading a collection of dazzling essays—dazzling not least because of their accessibility to a layman like me—by one of the great experts on Darwin, the Harvard Professor Stephen Jay Gould. He begins one of these essays by describing the egg-laying habits of the female mason wasp. I will not journey into the detail; sufficient to say that the young wasps crawl to freedom from the pith of the trees and stems in which the wasps' eggs are laid by chewing through the rough, convex sides of the partitions of their chambers. If the sides of the chambers are reversed by human intervention the young wasps still obey their implacable behavioural roles and, heading the wrong way, dig themselves to death.

What wasps lack, Gould concludes, and what human beings apparently have in plenty, is flexibility in behavioural response. We need to use some of that flexibility to protect the diversity of species as well as to clean up our atmosphere and our seas. I hope that I am right to be confident that, with your help, we are likely to behave more sensibly than the wasps.

HMSO publications are available from:

HMSO Publications Centre

(Mail and telephone orders only)

PO Box 276, London SW8 5DT

Telephone orders 071-873 9090

General enquiries 071-873 0011

(queuing system in operation for both numbers)

HMSO Bookshops

49 High Holborn, London, WC1V 6HB 071-873 0011 (Counter service only)

258 Broad Street, Birmingham, B1 2HE 021-643 3740

Southey House, 33 Wine Street, Bristol, BS1 2BQ (0272) 264306

9-21 Princess Street, Manchester, M60 8AS 061-834 7201

80 Chichester Street, Belfast, BT1 4JY (0232) 238451

71 Lothian Road, Edinburgh, EH3 9AZ 031-228 4181

HMSO's Accredited Agents

(see Yellow Pages)

and through good booksellers